



Department of Educational and Psychological Studies

College of Education

**Reviews of Single Subject Research Designs:
Applications to Special Education and School Psychology**

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And

Spring 2004 Graduate Students in Special Education and School Psychology

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Introduction

by

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During the Spring, 2004, semester at Florida International University, graduate students in the Educational Specialists Program in School Psychology and Exceptional Student Education Doctoral Program joined together to study how single subject research designs might be a useful method to apply as part of being accountable to clients. They embarked on this formal study by enrolling in an advanced graduate course entitled, *Behavioral Interventions Research and Evaluation*.

The result is this document of preliminary reviews of the literature, featuring single subject research designs. The authors evaluated the single subject research studies in accordance with the following criteria: Was the study applied, behavioral, reliable, analytic, effective, and generalizable? All of the reviews have been checked for accuracy in two ways. First, each author received feedback from peers. Second, each review was edited by the professor. After each feedback session, authors then revised their papers.

The topics represent a range of interests emerging from the individual author's background, experience, and curiosity. The importance of the topics is reflected in their reasons for uncovering the impact of various specialized interventions in terms of effects on special populations such as children with autism, ADHD, selective mutism, developmental delay, conduct disorders, and emotional handicaps. The types of interventions that were critiqued include The Good Behavior Game Plus Merit, peer tutoring, bullying prevention, early intervention for academic achievement, token reinforcement, audio support for reading comprehension, socialization training, group contingencies, different parenting styles to improve homework completion, and consultation procedures of school psychologists.

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It is a privilege to present the literature reviews to the wider community of educators so as to ensure that all of our clients might experience more and more elegant accountability measures. It's been a privilege to coach these graduate students as they learned to conduct a critical examination of good single subject research. Special gratitude is extended for the countless acts of kindness that were exchanged during this process.

Much have we learned from our teachers, more have we learned from our peers, but most have we learned from the students and clients.

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Copyright Protection

The research reviews in this document were written by graduate students in the School Psychology Educational Specialists Program and the Exceptional Student Education Doctoral Program in partial fulfillment of the requirements for EDP 7058: Behavioral Interventions Research and Evaluation [Professor Ann Nevin] at Florida International University, College of Education, Department of Educational and Psychological Services, Miami, FL, Spring 2004.

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Changes in Expressive Language of Children

The Effects of Interventions for Selective Mutes On In-Class Verbalizations and Discussions

by

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Florida International University

Abstract

Selective mutism is a disorder characterized by the failure to speak in specific social situations. It is usually diagnosed in childhood and has a variable course, lasting from a few months to a few years. A review of the published literature on selective mutism was conducted to obtain a better understanding of the disorder, as well as to determine assessments and interventions that have been successful in aiding children to break this silence. Selective mutism can have a negative impact on children's academic achievement because it limits their opportunity for social interactions and delays the development of appropriate language; thus, hindering their involvement in school activities. The articles reviewed range from research studies to overviews and summaries published over a period of about twenty years. The present includes a review of the literature on the etiology, diagnoses, and treatment options as well as a case study of a seven-year old female selective mute student in a second grade classroom using a behavioral treatment approach.

A Review of the Literature on Selective Mutism

The history of selective mutism dates back to the end of the nineteenth century when Kassumaul described a disorder in which individuals would not speak in certain situations, although they had the ability to speak. He described this disorder as *aphasia voluntaria*, indicating what he thought was a voluntary decision not to speak. Later, in 1934, Tramer called the behavior *elective mutism* after observing the same symptoms and pointing out that the children were "electing" not to speak (Krysanski, 2003). Today, the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) has adopted the term *selective mutism*, emphasizing that these children do not speak in "select" situations. There appears to be an overall consensus on this definition of the disorder in the articles reviewed.

Selective mutism usually occurs before five years of age. However, it is often not noticeable until the child enters school. Kolvin and Fundudis (1981) found that the usual account by the parents is that early speech development appears normal and for the next few years, parents have no anxieties about the child's general development. Later, it becomes evident, even to the parents that the child has become unduly shy in the company of anyone beyond the immediate family group. Instead of communicating verbally, children with selective mutism often use gestures, nodding, pulling, pushing, or monosyllabic utterances (Krysanski, 2003). Furthermore, Kolvin and Fundudis (1981) point out the most elective mutes show temperamental features which are abnormal in some respect. Some children are apathetic and withdrawn, while others are timid, anxious, and fearful. Often, they are very dependent on their parents and strongly tied to their mothers.

Selective mutism has a variable course ranging from only a few months to several years. In the Brown and Lloyd (1975) study discussed by Kolvin and Fundudis (1981), selective mutism is

referred to as a mild condition evidenced by the fact that five months after starting school, 20% of the previously non-speaking children were speaking frequently or occasionally to their teachers and 40% to other children. The disorder tends to be slightly more common in girls than in boys. Kolvin and Fundudis (1981) find that this is consistent with the fact that in pre-school children, emotional disorders of various kinds have at times been found to be more common in girls than in boys. Selective mutism is a rare disorder, found in less than 1% of individuals (Krysanski, 2003). However, Kolvin and Fundudis (1981) point out that the prevalence rate of selective mutism is dependent on whether it is broadly or narrowly defined. If it is broadly defined, then a large number of students who are unwilling to speak when they enter school or immigrant students who are unfamiliar and uncomfortable with a new language will be mislabeled selective mutes.

Criteria for Diagnosing Selective Mutism

According to the DSM-IV-TR, several criteria must be met for diagnosis of elective mutism. These include: (1) consistent failure to speak in specific social situations where there is an expectation for speaking, despite speaking in other situations; (2) the behavior interferes with educational or occupational achievement as well as with social communication; (3) the disturbance is at least one month in duration (not including the first month of school); (4) failure to speak is not associated with lack of knowledge of or comfort with the language spoken in the social situation; (5) the disturbance is not better accounted for by a Communication Disorder and doesn't occur exclusively during the course of a Pervasive Developmental Disorder.

Etiological explanations for selective mutism vary widely (Krysanski, 2003). Psychodynamic theorists see selective mutism as a manifestation of unresolved conflict where the mutism is a way to cope with anger or anxiety. Behavioral theorists believe that selective mutism is the result of a series of negatively reinforced responses in which the refusal to speak manipulates the environment. In a family systems approach, children with selective mutism are seen as the result of faulty family relationships such as dominance, over protectiveness, and strictness. Yet other researchers suggest that selective mutism is a type of social phobia associated with severe social anxiety. Trauma, abuse, divorce, death of a loved one, life-threatening experiences and frequent moves are factors that have also been associated with selective mutism.

There are a wide variety of other psychiatric problems that have been described in children with selective mutism (Krysanski, 2003). Some researchers have found these children to have a higher incidence of elimination problems, such as enuresis and encopresis (Kolvin & Fundudis, 1981). It has also been found that a high proportion of children with selective mutism also had developmental disorders or delays. Co-morbidity also exists between selective mutism and Asperger's disorder because the latter is a mild form of autism that inhibits social ability and functioning.

As with all other disorders, assessments should include a comprehensive evaluation to rule out other explanations for the disturbance of language use and to assess for co-morbid factors (Krysanski, 1981). Interviews with parents are an essential part of this process because most of these children do engage in conversation with immediate family members. An interview with the child is also suggested. Although this may be difficult, it would allow the therapist to make observations during interactions. Krysanski (1981) also recommends psychiatric, speech, and cognitive assessments to obtain a complete picture of the child.

Treatment for Selective Mutism

Treatment for selective mutism has often been considered difficult because many children with selective mutism have been shown to be resistant to treatment (Kolvin & Fundudis, 1981). Perhaps this is due in part to the fact that these children are often negatively reinforced for their behavior by a withdrawal of requests for them to speak. According to Stone, Kratochwill, Sladeczek, & Serlin (2002), there are four major models of treatment used to treat selective mutism. These are as follows: The psychodynamic model, family systems therapy, behavior therapy model, and biological approaches. Psychodynamic therapy typically involves using verbal interactions, art, or play to identify the underlying, unconscious conflict that leads to the problem behavior. In family systems therapy, the goal is to identify and treat dysfunctional family patterns by bringing everyone to conscious awareness. The behavior therapy model views behavior as being learned through principles of classical conditioning, operant conditioning, and observational learning (Stone, Kratochwill, Sladeczek, & Serlin, 2002). Biological approaches include the use of pharmacological treatments based on the biological determinants.

Child behavior therapy treatments for elective mutism generally seek to elicit speech, then to increase the frequency of speech in all environments and to all persons. Behavioral treatment programs have proven moderately successful as indicated by 5- and 10-year follow-up studies with electively mute children in which Kolvin & Fundudis (1981) found that forty-six percent of the subjects showed continued improvement (Richburg & Cobia, 1994). Successful treatment approaches have emphasized a variety of behavioral interventions such as contingency management programs, shaping, escape procedures, systematic desensitization, and stimulus fading (Richburg & Cobia, 1994).

In a case study published by Kehle, Owen, & Cressy (1990) the use self-modeling was proven to have positive results in helping a child to verbally interact with teachers and peers. Self-Modeling is defined as the positive change in behavior that results from repeated observations of oneself on videotapes that depict only appropriate or desired behaviors. This study relates self-modeling to Bandura's social cognitive theory (1986), in which behavior change is mediated by self-efficacy. In the case of electively mute children, they possess the verbal skills but lack the self-belief that they can successfully employ the skills in classroom activities. Self-modeling is a relatively simple and inexpensive intervention and requires little time to implement (Kehle, Owen, & Cressy, 1990).

The clinical case study by Kehle et al., (1990) involved a six-year-old elective mute male who would not emit any vocalization to anyone in the school setting including his own mother if she was present at school. However, according to the mother, the child conversed freely in the home setting. This suggests that the mutism was dependent on situational boundaries. The study employed an ABC withdrawal design and was conducted in the classroom setting. Baseline data were collected during recess activities and regular classroom activities to determine if verbal interactions or vocal sounds were evidenced. However, the mute child did not exhibit these behaviors.

In order to begin the intervention phase, the mother was brought to school and in the child's own classroom instructed to ask the child nine questions (i.e., "What is your favorite flavor of ice cream?" "Who is your best friend?" etc.). No other person was present in the classroom and

after some prodding the child responded to the mother's questions. These mother-child interactions were videotaped. Immediately following, the child, in the regular classroom and with all the students, was asked the same nine questions by the teacher but as expected, did not respond. The tape was then edited to remove all scenes of the mute child not responding to the teacher's questions and scenes were inserted of him verbally responding to his mother's questions. Therefore, in the edited tape it appeared that he was responding during regular class activities to the teacher's questions. This edited video was then shown back to the mute child on three different occasions over a period of a week. The treatment sessions occurred in a room adjacent to the child's classroom and the child was reinforced with either a baseball card or a peppermint candy immediately following each verbal response on the edited tape. However, after a total of eighteen trials during a three treatment sessions, there was still no apparent effect in verbalization. Subsequently, with the mute child's permission (indicated by a nod of his head) the edited ape was shown to the entire class while he was present. The children showed signs of elation when they saw and heard the "mute" child talking on video. Unfortunately, the next three days at school didn't bring about any verbal interaction.

At this point, the researchers developed several hypotheses for why the mute child was not reacting to the self-modeling intervention as expected. The most plausible reason for this was thought to be that the edited video did not depict a sufficient amount of time showing the child talking. The decision was to create a new tape in which the mother would make an attempt to get the child to elaborate on his short answers; thus, engaging the child in conversation for a longer period of time. The construction of the second edited intervention tape followed the same procedure that was involved in the construction of the first tape. Thus, the second edited videotape depicted the mute child supposedly responding verbally in an appropriate manner to his teacher's nine questions.

This second tape was shown to the mute child in individual sessions on two different days. Surprisingly, on the second day of intervention using the second tape, the child began to converse freely with the experimenters, teachers, and even the principal. The child also introduced all of his classmates to the experimenters. Furthermore, the newfound confidence encouraged him to willingly speak about elective mutism to a group of psychology students at the university. His school awarded him "Student of the Month" for his classroom participation and academic accomplishment.

Richburg & Cobia (1994) conducted a case study of Mary, a five-year-old, kindergarten student who was referred to the school counselor because of her unwillingness to verbally communicate with her teacher and peers in group activities. During the observation period, the counselor noted that Mary seemed nervous and shy. She would play only in groups of two or three children. Mary refused to talk to anyone in a large group setting and only minimally in a small group setting. However, if another child came close to the small group of the group got loud, all verbal behavior would cease.

Since the resource teacher was able to elicit speech from Mary using reinforcements, stimulus fading was used to introduce persons to whom Mary would speak into an environment in which she would not, hoping that speech would generalize to the classroom setting. The small group was gradually expanded to include children from the large group until the whole class was included. Mary could earn positive reinforcements such as tangible rewards, stickers, and games

as well as verbal praise for talking in the large group. This treatment required continuous speech, which proved to be too noisy and interfered with the learning process.

The counselor then used a second intervention, combining contingency management with positive reinforcement and stimulus fading. For three sessions, the school counselor used play media to elicit and maintain speech in her office. Mary then chose a classmate to bring with her for the fourth counseling session. During this session she spoke to both the counselor and the classmate. The students chose two reinforcers contingent on Mary speaking to the classroom teacher in a large group setting. Three children were added to the group (one at a time) over the next few sessions. Mary had not exhibited any disruption of speech during the first eight sessions. Therefore, the counselor decided to move the next session to the classroom where students were engaged in learning center activities. Mary was mute for the first twenty minutes. However, during the last ten minutes of the session, she sang songs with the small group. Mary's speech continued undisrupted for the next few classroom sessions until a stranger entered the room to speak to the counselor. Mary became silent and resumed speaking as soon as the person left. Mary continued to speak in a small group even when the counselor stopped attending the sessions and monitored her progress through teacher observations. In spite of this, the verbal behavior did not transfer over to the large group setting. With only three weeks left in the school year, a modification of the intervention would have to begin the next school year. It was suspected that the stimulus fading technique might have been applied too quickly.

The strategy was then reversed for the following school year. It was agreed to introduce the people to whom Mary would not speak to into an environment in which she would. To begin this intervention phase, the new teacher for the following school year visited Mary at home during the summer and described activities that they would do in the first grade classroom throughout the year. Mary did not speak for the first four days of the school but by the fifth day she was speaking softly on a one-on-one basis. By the end of the first month she was speaking to the teacher in front of a small group and by December she earned her reward for speaking to the teacher in front of the entire class. She continued to communicate verbally throughout the year. The behavioral strategies described in this study demonstrate the need to plan, implement, monitor, and revise interventions in order to change or initiate speech behaviors (Richburg & Cobia, 1994).

Yet another behavioral intervention would be the use of cooperative learning groups to facilitate student interaction. In a study by Wilcox, Sbardellati, & Nevin (1987), teachers used cooperative learning groups to increase students with disabilities interactions with their peers with and without handicaps. The children in this study were twenty first graders without handicaps and one eight-year-old girl with severe handicaps. Due to the program's success the student with disabilities Debbie, was successfully mainstreamed into the morning academic period, lunch, and recess. (Wilcox et al., 1987). For the purpose of this study, any verbal or nonverbal interaction was defined as "interaction".

According to the authors, the teacher implemented cooperative learning groups by following eight basic steps. First, a group size of four students per group was specified. Next, the teacher organized the assignment of students to groups with one group always including Debbie. Steps three and four consisted of the teacher ensuring that each group had access to "one" necessary item; this encouraged sharing within the group. The students were then asked to complete the academic tasks in such a way that they would help, share, and provide positive

reinforcement to each other. The teacher provided monitoring by listening to and observing how the children completed the assignment. Whenever the group was having trouble with a task, the teacher would intervene. Finally, the group's performance was to be evaluated by the teacher who commended jobs well done and provided reinforcement using stickers, stars, etc.

The results demonstrated that Debbie consistently increased her initiation of interactions with classmates. Correspondingly, the other children also increased their interactions with her. Furthermore, the number of students with whom Debbie interacted with also increased. All of the students participated, shared and reciprocated. The success of the program was evidenced by Debbie becoming an "avid talker" and increased facility in speaking (Wilcox et al., 1987). These successes could be replicated if implemented with selective mute children because the students would perceive that they could reach their learning goals if and only if other students in their group also reach their goals.

Conclusion

The results of the literature review indicate that selective mutism can be overcome with specific interventions. The still-unanswered question might be to determine the effects of interventions for selective mutism on in-class verbalizations and discussions.

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Academic Behavior Change in Schools

Peer Tutoring for Children with ADHD: Effects on Classroom Behavior and Academic Performance

by

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Attention-deficit hyperactivity disorder (ADHD) is a psychiatric diagnosis applied to children and adolescents who exhibit developmentally inappropriate levels of inattention or impulsivity-overactivity. Approximately 3%-5% of elementary school-aged children in the United States have been diagnosed with this disorder. Children with ADHD are at a higher than average risk for a variety of behavior difficulties, poor relationship with peers and they frequently struggle scholastically. About 40%-80% of children with ADHD have been found to exhibit learning and/or achievement problems (Mrug, Hoza & Gerdes, 2001).

This literature review will discuss the findings of how a simple intervention, such as class-wide peer tutoring, can help students with ADHD improve their behavior in the classroom, as well as improve academically. I am a fourth grade teacher with about three students in my class who are diagnosed with ADHD and do not receive special services. With all of the demands that face teachers, they definitely need some assistance in helping those low achieving students who do not have the attention span of other students. Because of budget cuts and other financial issues that affect the school system, they no longer provide teachers with an instructional aide. The research shows that using peers to help low achieving students with ADHD not only alleviates the teacher, but it also improves the students' performance behaviorally, academically, and socially.

There are three main types of interventions used for students with ADHD. They are either given psycho stimulant medication, contingency management programming, or a combination of the two. There few school-based interventions available for teachers to use. The research that I have conducted takes into account a rather straightforward intervention that teachers and other school professionals can use in the classroom to help improve the behavior and learning of students with ADHD.

WHAT IS PEER TUTORING?

Peer tutoring can be defined as any instructional strategy in which two students work together on an academic activity, with one student playing the role of "teacher," providing assistance, instruction, and feedback to the other student. There are many different models of peer tutoring, with the most common being the Class-Wide Peer Tutoring (CWPT) model. No matter which model is used by the teacher, they all have a few things in common. These include (a) the student working one-on-one with another individual, (b) the instructional pace is determined by the learner, (c) continuous prompting of academic responses, and (d) frequent and immediate feedback about the quality of the performance (DuPaul & Eckert, 1998). The teacher's role during peer tutoring is to monitor the behavior of the tutoring pairs in the classroom and providing assistance of necessary. The teacher may also provide bonus points for pairs that are conducting the peer tutoring correctly (DuPaul & Henningson, 1993).

DuPaul, Ervin, Hook, and McGoey (1998) investigated the effects of CWPT on the classroom behavior and academic performance of students with ADHD. The hypothesis was that

CWPT would lead to higher levels of on-task behavior, lower activity levels, and better performance weekly on posttests relevant to classroom activities. They studied a total of 19 students of which 16 were boys and 3 were girls. The participants attended 1st through 5th grade in two different school districts (one urban, one suburban) in eastern Pennsylvania. DuPaul, et al. (1998) chose the students that were used in this research because they met the following criteria: (a) teacher and parent complaints of inattentive, impulsive, and highly active behavior; (b) parent report on the Diagnostic Interview Schedule for Children of clinically significant symptoms of ADHD meeting the criteria of the DSM-IV for this disorder; (c) parent and teacher ratings on the ADHD Rating Scale indicating the presence of 8 of the 14 symptoms of ADHD to a significant degree; (d) parent or teacher ratings on the Attention Problems subscale of the Child Behavior Checklist; (e) at least average intelligence on the Wechsler Intelligence Scale for Children-III; (f) not presently on psychotropic medication and not receiving special education services; and (g) written parental consent and verbal consent from the child to participate. The CWPT model was implemented with these 19 students in their general education classrooms.

Classroom behavior, academic performance and social validation were measured in this experiment. For classroom behavior, direct observations were conducted to determine the frequency of on-task, off-task and fidgety behavior. Observers used the Behavioral Observations of Students in Schools scale. For academic performance, the teacher administered pretests and posttests of the material covered during the week. The observers used math and spelling as their target areas. The third dependent measure was social validation. Students and teachers completed consumer satisfaction ratings at the end of the study to determine whether they believed CWPT was helpful (DuPaul, et al., 1998).

In order to determine the effects of class-wide peer tutoring on academic and behavior performance, DuPaul, et al. (1998) used an ABAB reversal design in 18 classrooms over the course of 2 school years. Each participant was studied under four conditions: Baseline 1 (typical classroom activities), CWPT 1 (implementation of CWPT in math or spelling), Baseline 2, and CWPT 2. Each phase lasted anywhere from 1 to 2 weeks. Interobserver agreement was obtained during 20% of the observations and 100% of the weekly pretests and posttests (DuPaul et al., 1998).

The researchers concluded that CWPT increases active engagement for students with ADHD and can reduce disruptive off-task behavior. Levels of on-task behavior increased and off-task behavior, as well as fidgeting, decreased. The effects of CWPT on pretest and posttests scores seemed to vary across individuals, but most students' scores had increased during the CWPT phase. It is evident that using peer-mediated interventions such as CWPT can produce a significant increase in attention to academic materials, even if the student has serious attention and behavior problems (DuPaul et al., 1998).

The limitations of this study are due to the use of, or lack of, stimulant medication and contingency management interventions in addressing these ADHD students. It was not mentioned which of the 19 students were being treated with one or both of the above mentioned interventions. The researchers should have grouped the students by the type of interventions being used and then intervened with CWPT. It may have impacted the results of the study because those ADHD children who are not receiving any interventions outside of CWPT are at a potential disadvantage

for showing improvements compared to their peers who are on medication or behavioral management interventions.

One of the earliest studies of peer tutoring as part of a school-based intervention for students with ADHD was conducted by Robinson, Newby and Ganzell (1981). This study was conducted to determine the effects of using a class wide token reinforcement system on the academic performance of 18 third grade boys diagnosed as hyperactive. This study was conducted in the boys' special education classroom. The dependent measure for this study was passing vocabulary tests administered to the students weekly. Students were engaged in a rather simple peer tutoring procedure. The students with ADHD were working with other students who had already passed a given level of the vocabulary test. The tutor helped the tutee sound out words and provided immediate reinforcement (e.g. praise statements) when the tutee was able to use a new vocabulary word in a sentence correctly. In order to do this study, researchers used a single-subject BAB reversal design. During the treatment phases (B), the students earned tokens for passing vocabulary tests and helping their classmates do the same. These tokens were important for the students because they traded them in for playing time on a video game (Robinson et al., 1981).

The results of this study showed that the combination of token reinforcement and peer tutoring led to immediate gains in vocabulary performance for most of the boys with ADHD. By the end of the study, 13 out of the 18 boys had successfully completed the final level of vocabulary achievement. It was also concluded that classroom disruptive behavior decreased and social interactions amongst the students with and without ADHD improved. The only limitations found in this study were that the use of token reinforcement did not allow the researchers to determine the effects of peer tutoring on the academic improvement of the students. Therefore the conclusion of this study is that peer tutoring can be an effective intervention to improve academic engagement especially when combined with other treatment strategies such as token reinforcement.

Another study by DuPaul and Henningson (1993) was conducted to determine the effects of peer tutoring on the classroom performance of a 7-year-old boy, Don, who was referred to an outpatient psychiatry clinic due to problems with attention span, impulse control, and activity level. Don was performing low academically, particularly in math. This controlled case study was conducted in Don's regular education second grade classroom. There were 28 other students in his class, the regular education teacher, as well as the special education teacher.

There were two dependent measures used for this research: observations of ADHD behaviors and curriculum-based measurement. Don was observed during his mathematics block using a modified version of the ADHD Behavior Coding System. The two behaviors observed with the scale were on-task behavior and fidgeting. Curriculum-based measurement probes were used to determine changes in math skills as a direct result of peer tutoring (DuPaul & Henningson, 1993).

DuPaul and Henningson (1993) used a single-subject reversal ABAB design to evaluate the effects of peer tutoring relative to baseline conditions on on-task behavior, fidgeting, and math performance as assessed by the curriculum-based measurement probes. The results of using peer tutoring with Don led to increases in on-task behavior and reductions in fidgeting during math class. Less reliable findings were obtained with respect to curriculum-based measurement probes,

although the student did appear to make gains during the second peer tutoring phase. The findings of this study were limited because only one subject was used and minimal data is available regarding the changes in academic performance. However, the reversal design indicated that performance measures decreased when peer tutoring was removed from this single subject, thus increasing the believability that peer tutoring controlled increased academic scores. Another limitation found is that no assessment was made regarding the acceptability of this intervention to the teacher, like previous studies have shown (DuPaul & Henningson, 1993).

Fuchs, et al. (1995) analyzed the effects of class wide peer-assisted learning strategies (PALS) in mathematics. The students who were chosen for this study were identified as having one of three types of learning histories: average-achieving students, low-achieving students, and low achieving students with an identified learning disability. This study was different than previous studies because it went beyond measuring the effects of peer tutoring on basic facts and computational problems. This study examined transfer effects from a mathematics computation treatment to the mathematics concepts and applications domain that require higher order thinking (Fuchs et al., 1995).

The setting for this study was in nine schools in a southeastern, urban school district. They selected the schools based on low average scores on the district's annual comprehensive test of basic skills, high percentage of students on free or reduced lunch, and a medium sized population of African-American students in the school. Forty general education teachers (grades 2-4) were selected to participate in this study. They in turn, selected three students in their classes that fit the above mentioned criteria based on the achievement levels (Fuchs et al., 1995).

All of the students involved in this study were given weekly curriculum-based measurement assessments to monitor student progress towards proficiency on the grade level mathematics operations curriculum and to identify an appropriate peer tutor for PALS. The PALS method is similar to CWPT as it is a peer tutor model. It includes peer modeling, feedback by the tutor to confirm and praise, and frequent verbal and written interactions between tutor and tutees (Fuchs et al., 1995).

There were two types of measures involved in this study. The first is teacher planning and the second is acquisition and transfer learning. Instructional planning was measured by maintaining instructional plan sheets that specified the skills that will be addressed, the grouping arrangements they will use, the number of minutes they will devote to the activity, and the motivational strategy they will use. Teacher planning was also measured using the *Teacher Planning Scale* in which teachers indicated, using a 5-point Likert scale, whether they agree or disagree with certain statements. Acquisitions and transfer learning were measured separately. Acquisition was measured using the *Math Operations Test-Revised* which samples problems across Grades 1-6 from the operations portion of the Tennessee curriculum. The transfer measure was the *Mathematics Concepts and Applications Test* which samples problems across Grades 1-6 from the concepts/applications portions of the same Tennessee curriculum (Fuchs et al., 1995).

The result of this study, much like the other ones, is a positive one. PALS teachers reported teaching more operations skills, devoting more time to one-on-one instruction, less time to independent seatwork, and more time to peer-mediated instructions. Furthermore, with the accurate implementation of PALS, mathematics achievement across acquisition and transfer measures for students with varying learning histories was superior. Current findings support the

effectiveness of implementing PALS to serve students with a variety of backgrounds (Fuchs et al., 1995).

Strayhorn, Jr. and Bickel (2002) hypothesized that children with ADHD who received individual tutoring for reading and behavior problems will display fewer symptoms in a one-on-one setting. Their study was conducted in a public school where tutoring was offered to students with reading and behavior problems. Thirty children were selected to participate in this study, 11 girls and 19 boys. Twenty-six were African- American, 1 Euro-American and 3 other. One of the students was in kindergarten, 7 were in first grade, 5 were second graders 13 were in third grade, and 4 of them were fourth graders. These students received behavior ratings by their classroom teachers when they started the intervention and then tutors rated their behavior as they had observed in the tutoring sessions. Behavior ratings utilized the *ADHD Symptom Checklist 4* (Strayhorn & Bickel, 2002).

The intervention for this study was to tutor the students individually for 45 minutes with an adult who took the child from the classroom to a church across the street from the school. Unlike CWPT and PALS, this strategy involved an adult, not a peer tutor. The task of these tutors was to find the reading level in which the student could work at, and progress up the hierarchy. The results of the study indicated that most of the children showed significant improvement in reading skills. Some even showed dramatic changes. The children during tutoring sessions were on average much more attentive and cooperative than in the regular classroom. This simple design does have some limitations. It is possible that rater bias occurred. Ideally, the teacher and the tutor should have rated the students in both of the settings. This would have allowed for interrater reliability checks (Strayhorn & Bickel, 2002). This study also makes it impossible to generalize to the general education classroom because individual tutors are unheard of. Parents may choose to pay for tutoring sessions after school, which can be quite pricey and unattainable for some of our parents, even though it will be of great benefit for their child to be successful in school.

Conclusions

After reviewing the literature, it is quite clear that any form of class wide peer tutoring for students with ADHD not only changes the manner in which instruction is provided, but it allows these children to improve their academic achievement. It is very difficult for a student with ADHD to focus when given group instruction and when there isn't immediate reinforcement for their actions. CWPT enables the student with ADHD to sustain his/her attention longer and to complete assignments. CWPT allows the student to work at his/her own pace and instructional level, while receiving frequent opportunities to actively respond to academic material with immediate feedback.

Each article that has been reviewed described how efficient peer tutoring was for students with ADHD. Some articles focused on spelling and vocabulary, others on mathematics and most also focused on increasing on-task behaviors. But none of them focused on other subject areas that might not be based on basic memorization of facts. What is needed is a study of *the* effect of class wide peer tutoring on students with ADHD on science or social studies material. These two subjects require much more than memorization of words or simple math computation. Such a study would be a higher challenge than those studies previously done on peer tutoring and it would add to a growing body of research.

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A Review of Literature on the Effect of Early Academic Interventions and the Future Success of African Americans

by

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With the creation of Project Head Start in the summer of 1965 came an upsurge of interest in the true effects of early childhood interventions have upon the future academic success of students from low-income families. As a result of such interest, numerous studies emerged which focused upon the short and long-term effects of intervention in the primary years of life. From the 1990-2003 research literature found on early academic interventions, six articles met the inclusionary criteria for this review. Overall, the literature reflected strong, positive evidence concerning the effectiveness of early childhood interventions on the future academic success of African American students in low socio-economic status neighborhoods. The selected articles focused upon the significant influence of such factors as early educational experience, motivation, mobility, and parent involvement through analyses of program models, evaluation, and research.

Despite the global overuse of the term “early childhood intervention” to describe a variety of services conducted, the articles selected for this review failed to provide a distinct definition of early intervention. Thus, for the purpose of this review, early intervention is defined as the provision of educational services to children, ranging in age from infancy to 8 years, who have been identified in accordance with state government standards as being at risk of poor outcomes due to social and/or environmental disadvantages. Interventions appeared to be preventive in nature by providing early cognitive development in hopes to reduce the probability of poor academic performance, low motivation, or future failure amongst at risk populations.

Sources contributing to the development of early childhood interventions and the reporting of the efficacy of such programs were utilized such as governmentally funded public service programs such as the Abecedarian Project (Campbell & Ramey, 1995) and empirically sound research such as that found in the construction of the Model of Early Schooling proposed by Reynolds (1991).

Although not clearly noted in all articles of relevance, one theoretical orientation proved salient amongst five of the articles reviewed. Lee et al. (1990), Reynolds (1991), and Reynolds and Temple (1998) utilized a developmental theoretical approach. However, Campbell and Ramey (1994, 1995) noted the General Systems Theory as the basis for their research study. In comparison, Rauh et al. (2003) proposed an ecological theory emphasizing the effect of context on development.

Reynolds (1991) provided a succinct model and program description. Other researchers, Campbell and Ramey (1994, 1995), Lee et al. (1990), Rauh et al. (2003), and Reynolds and Temple (1998), evaluated the implementation of programs in lower SES neighborhoods. Furthermore, all six articles reported on the effectiveness of early interventions.

The articles reviewed were research-based and focused upon analyzing the effectiveness of early academic interventions on academic achievement. Campbell and Ramey (1994, 1995) and Reynolds and Temple (1998) highlight the extended effects of early intervention efforts into

adolescence, while Lee et al. (1990) and Rauh et al. (2003) focus upon the immediate effects of such interventions. In an effort to provide an overview of studies conducted to date that are fashioned to address the effect of early interventions on the academic success of African Americans, the results of the selected research articles are highlighted.

Reynolds (1991) developed a heuristic model for use with urban populations at risk of low academic achievement and school failure. First- and second-year reading and mathematics achievement, as well as, socio-emotional maturity were analyzed utilizing a synthesis of traditional theories of learning and research-based evidence. Influential variables noted as readiness attributes (cognitive readiness (ENTER-K), school socioeconomic status (S-SES), sex, and pre-kindergarten experience (PREK), intervening kindergarten influences (motivation and achievement), and intervening first-year influence (school mobility and parent involvement) dictate one's movement towards heightened performance first- and second-year outcomes. The determination of the inherent effects of prior achievement over time is continuously addressed throughout each "wave" of the model with an emphasis placed upon the analysis of three main questions:

1. What are the effects of readiness attributes on first- and second-year outcomes, particularly their stability and their paths of influence?
2. What are the effects of direct, mediating, and indirect intervening variables, especially those alterable by educational intervention?
3. What is the stability of effects of variables from first- to second-year?

An empirical test of the model was conducted and the final model was found to have a good fit with the data.

Research methodology utilized in the selected articles varied slightly. Researchers such as Campbell and Ramey (1994, 1995) and Rauh et al. (2003) utilized statistical experimental methods with an emphasis upon random assignment to the experimental and control groups. However, other researchers conducted longitudinal (Reynolds, 1991; Reynolds and Temple, 1998) and follow-up assessments (Lee et al., 1990) of the efficacy of the pre-school and early elementary school interventions. Methods utilized produced similar results substantiating claims that most programs of relatively good quality have relevant short-term effects on cognitive ability, early school achievement, and social adjustment (Reynolds, 1991). However, there were no single-subject research designs in the selected research studies.

Campbell and Ramey (1995) evaluated the cognitive and academic outcomes associated with the duration of effects of early childhood interventions utilized amongst a sample of African American adolescents from low-income families identified as at risk for suboptimal cognitive development. They guided their study in accordance with five research questions:

1. Were there different patterns of intellectual development from infancy through mid-adolescence for children who had early educational intervention compared with untreated controls?
2. Were there detectable effects of early educational intervention in the academic test scores of treated individuals at age 15, seven years after all intervention ended?

3. Across 10 years in school, were there differences in negative indexes of school progress (retention in grade or use of special education) as a function of early intervention?
4. What was the more optimal timing for intervention: preschool or early elementary school?
5. How do the outcomes of this program compare to those of other early childhood programs?

Researchers developed and implemented an educational program for use at the preschool and school-age level. Curriculum specific to the four major domains was utilized: (1) cognitive and fine-motor development, (2) social and self-help skills, (3) language and gross motor skills with the (4) integration of increased parental involvement upon entrance to kindergarten. Reported assessments of achievement and intelligence were used so to compute between-subjects scores which were inadvertently utilized in the repeated measures analysis of variance. Results indicated that higher IQ scores over time were positively correlated to duration of treatment with benefits of treatment reflected more consistently in relation to academic test scores than IQ scores. Recommendations were made for further research to be conducted focusing on the interaction between school-age treatment and child and family factors to learn how they may potentate one another.

Lee et al. (1990) found that Head Start involvement produced enduring effects amongst disadvantaged African American children through Grade 1 on measures of school success when compared to no preschool attendance. Researchers incorporated pretest/posttest and comparison group data in the analyses of the adjusted differences in outcome scores between Head Start and relevant comparison groups. This analysis produced relative significance of the effects of the implementation of Head Start programs in the low-SES populations due to found "educational significance". All educationally significant effects analyzed (4 out of 10) favored Head Start. However, a decrease in effects over time was implied with the provision of two logical explanations accounting for such findings. First, poor children are likely to be concentrated in low-SES schools often providing reduced learning opportunities. Secondly, such children are more likely to come from families headed by less educated single parent homes where the primary income is consequently low. Policy implications were drawn and recommendations for further study in the provision of short-term interventions were proposed.

Rauh et al. (2003) described the biological, social, and community influences known to confound the effects of early intervention attempts made through the Head Start Program utilizing a multi-level approach. Twelve dichotomous indicators of biomedical and demographic risk association with low academic performance were noted as low birth weight, inadequate spacing between births, maternal smoking in pregnancy, payment for birth by Medicaid, maternal substance abuse, maternal education, parity, lack of prenatal care, low 5-minute Apgar score, birth complications, marital status, mother's place of nativity. Researchers analyzed demographic and biomedical characteristics using such factors resulting in a more concise model found to be consistent in predicting reading scores. Characteristics were examined in conjunction with tests of community effects allowing for the increased understanding of which children appeared most likely to benefit from positive neighborhood conditions. Implications for early academic interventionists stressed the advantage of the assessment of the contribution of individual community level factors guaranteeing early intervention program success. The evidence supported the identification of

children at future educational risk and projected methods for the exploration of the numerous influences on school success.

Reynolds (1991) and Reynolds and Temple (1998) focused upon three variables thought to be significant including school readiness attributes, intervening kindergarten influences, and intervening first-year social-psychological influences. Through use of the previously described heuristic model, results of the complex information maximum-likelihood analysis conformed to expectations that the variables would affect early school success in first- and second-year. The importance of cognitive readiness was amplified highlighting the role of preschool intervention and home environment in early school adjustment. Furthermore, the indirect effect of pre-kindergarten on first- and second-year outcomes was noted. Researchers stressed the view that early intervention leads students at risk to school success rather than making students "successful". Inconsistencies were found in regards to parent involvement into the second year of the program. The importance of such school-related variables was supported, and the identified links accounted for future influence given their interrelatedness.

The review of the literature on the effect of early academic interventions on the future success of African Americans provided results that constitute hope and future effort placed in early interventions. Participation in extended early childhood intervention programs was found to be significantly correlated with higher reading achievement, decreased cumulative grade retention, and a reduction in special education placements (Reynolds & Temple, 1998). Furthermore, the intellectual and academic gains demonstrated by participants of the Abecedarian study were consistent into early adolescence (Campbell & Ramey, 1994) establishing the numerous benefits of early interventions especially in academic programs servicing African Americans in the low-SES population. Such outcomes have also contributed to the vast growth in government funded efforts and research based studies resulting in the growing conviction that with assistance at risk youth can and will achieve comparably to their more well off counterparts.

Conclusions

The selected studies allow for numerous implications regarding the field of early intervention. The studies demonstrated strong evidence that most programs of good quality have meaningful short-term effects on cognitive ability and prolonged effects upon academic achievement in such areas as reading and math. Furthermore, they identified the role variables such as parental involvement, motivation, exposure, and biological factors play in one's academic success, providing for further encouragement of the efforts put forth thus far by state legislatures and school systems utilizing such early academic programs. One area that is important to further explore is the impact of parental engagement and early literacy skill development during pre-school years upon the future success of African Americans, in particular the effects of caregiver-child interactions on the future success of African American preschool children and the effects of the development of early literacy and language skills on the future success of African American preschool children.

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The Effects of Audio Support on Reading and Comprehension

by

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The use of audio support during reading is a strategy that many teachers have been implementing for years. Its benefits can be seen with a variety of populations. With an increase in the use of technology and the need for research-based interventions in the classroom, audio support is becoming more widely used in schools today. Audio books have long been used for reading a variety of literature to students. When discussing the benefits of audio books, Kaiser (2000) believes "a fine oral reader expresses feelings of excitement, fear, curiosity, love, anger, and so on...these matters of voice and tone are often critical in students' comprehension and enjoyment of the story, and silent reading simply does not provide the clues many readers need." While all readers can experience these pleasures from audio books, they can be particularly beneficial with students who are English-language learners as well as students who have difficulties in the area of reading.

With the increasing demands placed on readers today, audio support is a tool used by students in the content area classes as well as with literature. Improvements in technology have helped make this possible. Many text books are now accompanied by compact discs with the ability to navigate through the text much easier than having to fast forward and rewind tapes. Various studies have demonstrated the use of audio support with a variety of populations and a variety of settings. The following articles report some of the effects of audio support.

Literature Review

Boyle et al. (2003) investigated the effects of audio texts on the acquisition of secondary-level content by students with mild disabilities. Particularly, they examined the direct effects of the audio text on the students' performance on content acquisition. This study compared 67 students from eight special education self-contained history classes with one of the following disabilities: learning disability, emotional disturbance, speech/language impairment, or other health impairment such as attention deficit-hyperactivity disorder. The study was conducted in eight self-contained history classrooms in six high schools serving a middle-class population. The target behavior was to increase cumulative content acquisition which was measured by a pre- and post- test in addition to five short-term quizzes. The participants in this study were organized into three experimental groups. The first group received instruction using recorded texts in conjunction with the SLiCK strategy which helped direct the reader's attention to important parts of the text, cued active listening, and helped synthesize and integrate the new information with the student's existing knowledge. The second experimental group received the recorded texts only. The control group relied only on traditional teacher-based instruction for support.

After six weeks of implementing the program, students' results on pre- and post- tests as well as on quizzes demonstrated that the use of an audio textbook with or without a strategy enhanced the content acquisition for high school students with mild cognitive deficits. Both treatment groups using the audio textbook scored significantly higher than the control group as reflected by knowledge acquisition scores. Another important discovery was that there was no significant difference in knowledge scores between the experimental group using the SLiCK

strategy in addition to the audio textbook, and the group that only had the audio support. Boyle et al. believe “these findings demonstrate the value of audio textbooks as an assistive device for students with mild cognitive disabilities... the effectiveness of the audio textbook alone as a material modification procedure was surprising...” One limitation of this study is the time period in which the study took place (six weeks), a short amount of time for a strategy to become part of a student’s repertoire. In addition, students were given a condensed version of the training for SLiCK in order to avoid missing instructional time. A third limitation is the great range of entry-level characteristics across the groups. Some students may not have had the necessary cognitive abilities to facilitate successes with this strategy.

Blum et al. conducted in 1995, a 19-week study in Fairfax County Public Schools to investigate whether home-based repeated reading with an audio model is a significant supplement to the literacy instructional program of second-language learners. The participants of this study included nine first-grade students with limited English proficiency. Their primary languages included Spanish, Vietnamese, Russian, Farsi, Laotian, Korean, and Arabic. This study was conducted in a first-grade classroom with fifteen students. A single-subject reversal design (ABA) with multiple baselines across individuals was used. Fluency assessment and self-monitoring behaviors were measured on a weekly basis for each participant. In addition, periodic assessment tasks including observation surveys, child reading motivation/behavior surveys, parent surveys, and teacher surveys were also collected and analyzed. Baseline activities included taking books home that had been shared in school so that they could practice reading them at least three times to themselves or to a family member. Samples of students’ oral reading were audiotaped and coded on a weekly basis. During the intervention phase, students also took home an audiotape of the book and a tape recorder for their home-based shared rereading. Instructions about rereading the book three times to themselves or family members remained the same.

After 9-11 weeks, all students returned their tape recorders and began taking only books home again. Visual inspection of graphic displays with linear “best fit” regression lines was employed as a means to evaluate weekly oral-reading samples and self-monitoring behaviors. With regards to fluency assessment, all participating students showed substantial growth over the baseline in their ability to read books of increasing difficulty fluently and accurately. During the intervention period, there was only a slight increase in the number of repetitions and self-corrections. Observation surveys confirmed that all students made growth in the areas of fluent reading level, letter identification, word recognition, and hearing and recording sounds. Analysis of the child motivation/behavior surveys revealed that children were reading more at home and were excited to learn to read. Eighty percent of the students reported that the books in combination with the audiotapes were most helpful in learning to read. Teacher and parent surveys also reported that the children had a better attitude about reading as well as an increase in reading behaviors. The biggest limitation in this study is the small sample size used in this study. Out of the nine limited English proficient students in the class, only five were chosen to be studied as part of this study. For this reason, some of the same researchers collaborated together once again almost five years later to repeat a study similar to this one, but on a much larger scale.

The study conducted by Koskinen and Blum in 2000 was a large-scale version of the aforementioned study. The purpose was to explore the impact of book-rich classroom environments and home reading, with and without an audio model, on reading motivation, comprehension, and fluency. This time, the focus was on both English-speaking students as well

as second-language learners. A total of 162 participants from 16 first-grade classes participated in this study. Of the 162, 105 were second-language learners whose primary languages included: Spanish, Vietnamese, Korean, Amharic, Cantonese, Urdu, Arabic, Somali, Turkish, Cambodia, French, Italian, Laotian, Tagalog, and Tibetan. The average student to teacher ratio in each of the 16 classrooms was 15:1. The seven Title I elementary schools where this study was conducted are part of the suburban school district near Washington DC. Between twenty-five to sixty-three percent of the students in these schools were eligible for free or reduced lunch. Literacy achievement was measured using literacy achievement measures such as the Oral Reading Assessment, the Writing Vocabulary Assessment, and the Oral Story Retelling Assessment. Motivation, behavior, and attitude measures were gauged using the Me and My Reading Scale, Teacher Survey of Child Behavior, Individual child interviews, parent surveys, and teacher questionnaire and interview.

For the purpose of this study, the sixteen classrooms were randomly assigned to one of the four experimental groups. They included:

- o Unmodified reading instruction: control group – daily language arts instruction using a variety of reading materials including easy story books, popular children's literature, and basal collections
- o Book-rich classrooms – 154 different multilevel books provided to supplement each classroom library.
- o Book-rich classrooms and rereading of books at home – opportunity for increased access to books expanded outside the classroom
- o Book-rich classrooms with audiotapes – encouraged daily reading of books with audiotapes at home

Statistical procedures such as one-way and two-way analyses of variance and covariance as well as chi-square and t-test procedures were used to analyze literacy achievement data as well as reading motivation, behavior, attitude data, and parts of the various questionnaires. The results of the study ultimately revealed benefits of a home component both with and without audiotapes. However, having access to audiotapes at home has additional benefits which include increased reading interest, social interaction, and behavior with books. Teachers and parents who implemented the audio books as part of the intervention were more positive about the impact of the project. Student motivation about reading was also higher, and they were able to recognize the benefits of reading with audiotapes.

Conclusions

Audio support for struggling readers can be seen as beneficial to many students. Research has been able to demonstrate its success in a variety of areas. There are, however, some unanswered questions that a single subject research design might address. For example, to what extent might ninth and tenth grade students with disabilities benefit from audio supports?

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The Effect of Different Parenting Styles on Academic Achievement

by

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Introduction

Today, childhood and adolescent achievement are almost exclusively defined in academic terms. Social skills, athletic ability, or personal fulfillment are secondary to doing well in school. Cultural institutions, such as the family, have a tremendous impact on children's school achievement (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987). Baumrind's (1991) parenting style typology has dominated the field as a method of describing parental characteristics. This typology consists of three parenting styles: authoritarian, authoritative, and permissive.

Authoritarian parenting style refers to child-rearing techniques characteristic of harsh disciplinary actions and rigid boundaries. Such parents tend to be strict, harsh, punitive, and demanding. They also tend to discourage verbal give-and-take with their children, expecting rules to be followed without further explanation (Baumrind, 1991). Authoritative parenting style, on the other hand, refers to child-rearing techniques in which parents exercise firm yet fair discipline. These parents establish and firmly enforce rules for their children's behavior. When rules are violated, they use nonpunitive methods of discipline. In addition, authoritative parents display warmth, love, and affection toward their children meanwhile reinforcing socially responsible and mature behavior. They encourage bi-directional communication, in which children's views are recognized. Finally, permissive parenting style refers to child-rearing techniques that place few, if any, rules upon children. In extreme cases, children experience complete freedom to make decisions without parental advice and their whereabouts are generally unknown to their parents. Communication between children and parents is nonexistent or minimal at best (Baumrind, 1991).

It is important to discern which parenting style yields greatest academic achievement. In doing so, educators can render advice to parents for fostering a home environment that is conducive to greater school performance. Additionally, intervention programs, books, and other literature for parents can be developed highlighting the parenting qualities most closely associated with high academic achievement in students.

Review of Related Literature

Parenting styles have been associated with academic successes. More specifically, authoritarian and permissive parenting styles have been associated with poor academic grades. Meanwhile, authoritative parenting style has become the prototype for appropriate parenting because it has consistently demonstrated a positive association with children's academic achievement (Baumrind, 1991).

Dornbusch and his colleagues (1987) conducted a study in which a very large and diverse sample of high school adolescents (N=7,836) from the San Francisco Bay area completed a questionnaire to derive measures of the style of parenting exhibited at home. The questionnaire was completed during school hours. The three parenting style indices on the student form were developed to roughly conform to Baumrind's three styles of parenting: authoritarian, authoritative,

and permissive. Twenty-five items or set of items were identified as closely reflecting one of the three styles, and each index was constructed by taking the means of the appropriate items. No question was allowed to contribute to more than one of the indices. Using high school grades as the criterion variable, the researchers wanted to discover if a relationship existed between parenting style and adolescent school performance.

The data indicate that students from a wide range of backgrounds (White, Asian, Black and Hispanic) tended to receive lower grades when their descriptions of family behavior indicated more authoritarian parenting, more permissive parenting, or less authoritative parenting. The research provided evidence that Baumrind's typology of parenting styles, originally formulated to explain social and cognitive development among children, can successfully be applied to adolescents and related to their academic performance in high school. In examining Asian parenting practices, nevertheless, Asian high school students reported that their families were higher on the index of authoritarian parenting and lower on the index of authoritative parenting yet received high grades in school. This anomaly called for further investigation.

In an attempt to explain this paradox, Chao (2001) closely examined the effects of parenting style and parent-adolescent relationships to determine whether they differed across European Americans and Asian Americans. Samples of 324 Chinese Americans and 208 European Americans were drawn from a larger sample of 1,755 adolescents in the ninth through twelfth grades in the greater Los Angeles area. Participants were given 50 minutes (the whole class period) to complete paper-and-pencil surveys that included parenting style measures, relationship closeness, and school performance outcomes. The parenting style measures were calculated using Baumrind's typology and in a similar fashion to the previous study. The relationship closeness measure was comprised of two scales, the cohesion subscale of the FACES II (Olson, Sprenkle, & Russell, 1979), and three items derived for this study that captured adolescents' satisfaction with their relationships with parents. The FACES II subscale consists of 10 items each for mothers and fathers. Lastly, adolescents' school grades were assessed through self-report of their cumulative grade point average (GPA) during high school. Such self-reporting, especially as it relates to GPA may result in inaccurate representation of school grades as students may "invent" grades to better project their image.

The study found that European American adolescents from authoritative families had significantly higher school grades than their counterparts from authoritarian families. These beneficial effects for authoritative parenting relative to authoritarian, however, were not found for Chinese adolescents. For this group, adolescents in authoritative and authoritarian families did not significantly differ on school grades, somewhat substantiating the findings in the previous study. Also, the study demonstrated that relationship closeness has positive effects on both school grades for European Americans but not Chinese Americans. Chao (2001) explained this phenomenon quite simply: parenting style has different meanings for different ethnic groups. Although relationship closeness with parents is valued by Chinese Americans and tap into the very core feature of an authoritative parent, these qualities are not important in fostering school achievement. Chinese American foster school achievement in their children through a parenting style identified as "training" emphasizing the importance of hard work, self-discipline, and obedience. Whereas Baumrind's parenting typology is predictive of school success or failure for European Americans, such findings do not hold true for Chinese American adolescents. Recognition of this finding should help researchers, practitioners, and educators to rethink typical

advice given to parents for promoting the development of youth. Authoritative parenting should not be treated as the prototype for some Chinese American groups.

Despite the extensive research literature examining parenting style and academic achievement, there are a number of important issues that require additional investigation. Most of the previous studies have focused on child rearing in White, middle class families. Examinations of parenting dimensions in other ethnic and economic groups have tended to focus on adolescents. In the current study, Shumow and colleagues (1998) extend the examination of Baumrind's parenting typology to a large sample of school-aged children growing up in low-income urban families. The study examined whether authoritarian, authoritative, and permissive parenting styles have the same implications for children growing up in low-income urban families as they do in middle-class families. The study also examined the stability of parenting style over a two-year period.

The researchers examined 216 families in the Milwaukee area. The person in each family who reported having primary parenting responsibilities was asked to complete a questionnaire and phone interviews each year. In most cases, questionnaires were completed by the children's mothers at their own leisure. The mothers were asked to respond to questions that reflected the extent to which they used authoritarian, authoritative, or permissive approaches to parenting. These questions not only focused on Baumrind's parenting typology, but also provided information about aspects of child rearing (pertaining to chores, rules, and punishment) that are difficult to obtain using other methods such as observation. Children also completed parenting measures at their schools. Items were read to the children to maintain their interest and ensure that items were understood. Children's report cards and achievement test results were provided by the school office and recorded on a form containing the child's identification number.

This study is unique, and unlike any in this literature review, in that both parents and students were asked to complete identical questionnaires to assess perceived parenting styles so that child and parent perceptions could be compared to improve the reliability of these measures. Since the other studies presented in this paper relied on students' perceptions of parenting style only, this may result in a potential problem because students may be reporting false or exaggerated claims creating a limitation.

Data indicate that parenting styles were stable over the two-year period. This stability substantiated Baumrind's (1991) argument that moderate stability in parenting styles can be expected longitudinally. It also suggested that the parenting styles were not simply reflective of transitory states or isolated responses, but rather were indicative of more enduring approaches to child rearing. It also is noteworthy that the low-income urban parents examined in this study evinced considerable stability, even though the families were confronted with numerous daily hassles and chronic life stresses related to economic hardship and difficult neighborhood conditions.

Consistent with other research, parents who reported authoritarian or permissive approaches to child rearing had children who scored lower on assessments of academic achievement and behavioral adjustment. Authoritative parenting style was associated positively with children's increased scores on assessments of academic achievement and negatively with their behavioral problems at home. Children behaved more maturely when their parents reported

taking their needs into account, setting reasonable standards, and being more positive with children. This study highlights the fact that parenting styles and their effect on academic achievement and behavioral adjustment in students cut through socioeconomic levels and environmental hardships associated with low-income families.

These findings are contrary, however, to speculations that authoritarianism may be developmentally appropriate or advantageous for children who are growing up in low-income urban settings as was once purported by Steinberg and colleagues (1994). This study suggested that minority youngsters, especially those from economically disadvantaged backgrounds benefited from relatively more authoritarian style of parenting because harsh living circumstances warrant stricter, more vigilant control. This was believed to be true for several years until Shumow and colleagues (1998) refuted such argument with their revolutionary study.

In 1996, a study conducted by Weiss and Schwarz rivaled Baumrind's finding that authoritative parenting style produced the most favorable outcome for white-middle class older adolescents. Participants were 178 high school students from the Connecticut area. They completed a questionnaire with items conforming to Baumrind's parenting style typology. Whereas Baumrind found that students from permissive homes scored moderately to poorly in academic achievement, in this study the permissive group rivaled the authoritative group in positive outcomes. Nevertheless, Weiss and Schwarz (1996) explained the incongruous finding by stating that the age difference between samples in the present study and other studies accounted for the discrepancy in the results. Parents may change their child-rearing strategy as their children mature. Parents who were highly autonomy-granting when their children were younger may have been providing too much freedom at the time resulting in negative outcomes in the school arena, for instance. Parents who appropriately reduced direct control over their children in late adolescence, however, may be helping their children to develop self-esteem and autonomy. This finding somewhat rivals Shumrow and colleagues' (1998) finding that parenting styles are stable over time. It should be noted, however, that the 1998 finding was conducted using children as participants, not older adolescents and the period only consisted of two years, which many researchers will argue is not long enough to determine stability in parenting styles.

Lastly, most of the research and studies on parenting styles and academic achievement have focused on high-school aged adolescents or younger children. The good outcomes found to be associated with authoritative parenting during elementary and high school years may not necessarily continue into the college years, a time when parental support and prohibitions are less ubiquitous.

Hickman and colleagues (2000) examined the relationship between parenting styles and academic achievement and adjustment of traditional college freshmen. Participants included 101 traditional college freshmen enrolled in introductory psychology courses at a large Midwestern university. Each participant provided self-report data that included general demographic information as well as measures of student adjustment to college, achievement, and perceptions of parenting style. The subscales from the Parental Authority Questionnaire (PAQ) were used to assess Baumrind's typology of parenting style. Achievement, measured as academic performance, was based on the student's reporting of their college GPA. The 67-item Student Adaptation to College Questionnaire (SACQ) was used to assess how well a student was adapting to the demands of a college environment.

The researchers hypothesized that college freshmen would display lower levels of academic achievement (GPA) when reared by authoritarian and permissive parenting styles. The results did not support this hypothesis, however, as no significant association between parenting style dimensions and academic achievement was found. However, authoritative parenting was found to have a positive impact on academic adjustment. Adolescents accustomed to a warm, emotional, and caring environment associated with open communication have an advantage when making the transition into college environment as they have achieved greater mastery and self-regulation of their environment while growing up. These findings demonstrate the need for further investigation when dealing with college students away from home as the results rival those found with elementary and high school students.

Summary and Conclusions

The studies presented in this literature review consist of large sample populations. Such studies provide empirically driven statistical data useful for researchers and educators. Nonetheless, it would be very interesting to conduct a single subject research design on three third grade students enrolled in a Miami-Dade County Public School (MDCPS) to discern if Baumrind's parenting typology functions as a predictor of the students' academic achievements. However, it seems that at least two aspects need to be studied in more detail to address the lack of examples of single subject research methodology with this topic and the lack of examples where the students come from a multiculturally and linguistically diverse community where different parenting styles may be intricately enmeshed.

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**Facilitating Appropriate Preschool Play
By Improving Preschoolers Social Skills and Linguistic Capabilities**

by

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Play provides a situation in which all children can learn, grow, and develop. Playing in a preschool environment is a primary context through which preschool children acquire knowledge and social competence. Play gives children comprehensible ways to understand their environment. Research suggests that there is also a correlation between the frequency and complexity of preschooler's play and IQ, problem solving, creativity and language development.

In order for play to be an effective learning environment for preschoolers, the environment must be carefully planned to encourage children's active participation. The daily schedule, adult-child interactions, and accommodations to meet individual needs are all important factors in developing an effective play situation. Perhaps the most important factor in appropriate preschool play is the child's ability to successfully interact with his/her peers via good social skills and linguistic capabilities (Hanline, 1999).

Much research focuses on social skills and linguistic capabilities as they are both central to successful preschool play. Past interventions have included successful adult-mediated intervention strategies. In adult-mediated interventions, adults may provide the support necessary for children with limited social communication skills to engage in play activities with their peers. Adults may also support language during play by giving the child labels to describe objects and/or desires and also by providing responses contingent on children's communication attempts and assigning meaning and interpretation of their language; and modeling language in context so that children can learn the forms, semantic content, and social-communicative use of language appropriate to the interaction (Craig-Unkifer & Kaiser, 2002). Therefore, this literature review and successive hypothetical study will ask the question: will improving a preschooler's social skills and linguistic capabilities engender a more successful preschool play experience and reduce unproductive and/or aggressive behaviors in preschool children.

DiLalla (1998) reported the relative influences of daycare providers, family members and child characteristics on preschoolers' social behaviors in a peer play setting. DiLalla examined the preschoolers' behavior in a novel peer play laboratory setting. In this study, preschoolers behaviors were rated on both pro-social and aggression scales. Parents completed questionnaires on their child's preschool or daycare experience, temperament, and also reported any behavior problems. DiLalla believed that daycare has become an important part of many families' lives, and greatly influences young children therefore it imperative to identify any particulars of daycare situations that may increase the likelihood that children will behave in socially inappropriate ways. Daycare also provides an essential socializing influence that may increase children's adaptability in social situations according to the NICHD Early Child Care Research Network (1997).

DiLalla's study examined 124 children (64 boys and 60 girls) in a laboratory playroom. All the children were within one month of their fifth birthdays. The children were predominately Caucasian (97%). 3% of the children were African-American. The children's parents had a variety of educational and occupational backgrounds. Two children were paired together for a 20 min. play

session. They were always the same sex, and had never met before. The children were told that they could do anything they liked in the playroom. They could play with: a tool bench, three action figures, kitchen toys and play food, puppets, a checker set, and a table and chairs. The children were videotaped through a one-way mirror. Since the children played in pairs, their scores could not be entered independently into the analyses. One child from each pair was randomly chosen and all subsequent analyses were based on that child's data. Children were rated on 5-point Likert-type scales. Two factors were examined. The first was level of aggression. Negative aggressive behaviors included teasing, hitting, grabbing, yelling, and throwing toys. The second factor was frequency of pro-social behaviors such as talking politely, inviting the other child to play, smiling at the other child in acknowledgment or praise, offering, or helping.

Results of this study suggest that child temperament and daycare experience are important factors to consider when studying the social behaviors of children however, results of the study were contrary to what was expected. No direct positive effects of daycare on aggression or on early pro-social behaviors were found. Daycare experiences did not increase children's pro-social behaviors with peers, and were even found to decrease them. Observed aggressive behaviors in the play lab were not predicated by either parental temperament scores or by the children's previous daycare experience. The most pro-social children were those who had never attended daycare. It was found that children's externalized behaviors were predicted by parental temperament ratings, however children who were rated as less active by their parents were rated as more pro-social in the peer play situation in the lab.

The researcher found that boys were more pro-social than girls during the first half of the session, but no sex difference emerged during the second half. This finding is inline with literature regarding preschoolers that suggests that girls are less pro-social, possibly because they are shyer, in novel situations, although they quickly warm up and are then equally as pro-social as boys. The researcher concluded that a child's temperament and previous daycare experience are important factors to consider in formulating a fuller understanding of preschoolers' social behaviors (DiLalla, 1998).

Hanline (1999). Studied how curriculum impacts preschoolers' play. Much research has been focused on whether teachers can facilitate quality preschool play. This article delineates an effective preschool play based curriculum based on recent relevant research. The author categorizes play into three types. The three types are: construction play, symbolic play, and sensorimotor play. Children should engage in these three types of play daily (Hanline, 1999). Depending on their age and developmental level, different amounts of time are recommended for each type of play. Children birth to 1 year of age spend 100% of their time in sensorimotor play; children 1 to 2 years of age spend approximately 80% of their time in sensorimotor play and the remaining 20% in simple symbolic play; children 2 to 3 years spend approximately 50% of time in sensorimotor, 25% in symbolic, and 25% in construction play; children 3 to 4 years engage in 30% sensorimotor, 40% symbolic, and 30% construction play; and children 4 to 5 years spend 25% in sensorimotor, 20% in symbolic, and 55% in construction play activities (Hanline, 1999).

Children engaging in construction play are representing ideas through a medium such as blocks. In symbolic play, preschoolers use their imaginations to transform actual people, objects, or events into make-believe or pretend persons, objects, or events. Children engaging in macro symbolic play assume pretend roles such as pretending to be mommy while playing in the house

center. In this type of play, preschoolers use miniature replicas of actual objects (i.e., toy vacuum cleaners). Sensorimotor play involves learning about the environment and how to manipulate that environment using the senses and physical interaction with the environment. Sensorimotor play can include fine and gross motor play. Examples of sensorimotor play include running and climbing, dancing, cutting, coloring and grasping.

According to Hanline (1999), the physical environment of the play (often the preschool classroom) is a very important factor in facilitating appropriate preschool play. The environment provides the foundation for play. The arrangement of toys and centers promotes engagement in appropriate play behaviors. The environment should be arranged with consideration for the chronological and developmental levels of the children. The research presented in this article shows that centers, best facilitate children's participation in construction, symbolic, and sensorimotor play on a daily basis. Centers in effective early childhood programs should include areas for block and micro symbolic play, macro symbolic play, fluid construction activities, manipulative materials, outdoor play, quiet time, and other interest areas.

Teacher-child interactions are critical to children's success in play-based teaching environments and are the factor that most heavily determines the developmental appropriateness of a program (Hanline, 1999). Children often thrive when a teacher or parent offers physical proximity, encouragement, attention, and verbal interaction. Teachers may also engage in "play training" which involves teachers joining children in their play, asking questions, making suggestions, and modeling behaviors to enrich the children's play.

Typically, playtime is directed by naturalistic interventions. Naturalistic interventions are essentially teaching episodes that are short in duration, distributed across time, and initiated by child behavior. Naturalistic interventions use natural consequences as functional reinforcers. For example, a child who uses one word utterances to get her needs met might not be understood by her teacher or peers and therefore not get what she wants. She would then work on expanding her statement to two or three word sentences. The teacher may begin naturalistic intervention by modeling an appropriate two-word utterance (i.e. "more juice"). If the child did not imitate the teacher, the teacher would then ask the child to say the modeled word ("Can you say more juice?"), and then intervene if necessary with a more specific prompt of requesting the child to say the modeled word ("Say more juice"). When appropriate, a physical prompt could be used. The child would be reinforced naturally by receiving what was requested (Hanline, 1999). In sum, this study provided a review of recent literature with an excellent framework of a preschool play based curriculum.

Craig-Unkefer and Kaiser (2002) studied the social communication skills of at-risk preschool children in a play context. Preschoolers sometimes have difficulty engaging with their peers in sustained interactions (Craig & Kaiser, 2002). To engage in social interactions competently, young children must be able to initiate and respond to social stimuli, take verbal turns, sustain social contact, and negotiate conflicts (Beckman & Leiber, 1994). The inability to communicate needs and wants during peer interactions can result in negative social consequences, including peer rejection (Hadley & Schuele, 1995). Some children who experience peer rejection as a result of their limited social communication skills begin to exhibit increased

aggressive or noncompliant behaviors (Bierman & Wargo, 1995). A cycle emerges: Poor communication skills lead to difficult interactions with peers, which lead to increased problem behavior established during the preschool years. This cycle is likely to persist if early intervention does not address underlying skill deficits (Craig & Kaiser, 2002). This study sought to develop interventions that would break this cycle.

Craig and Kaiser (2002) examined the effects of a three-component intervention on the social-communicative interactions of six preschool children. The six preschoolers chosen for this study were between the ages of 3 years 5 months and 3 years 11 months. They were selected based on the following criteria: (a) scored at least one standard deviation below the mean on receptive and expressive language subscales and/or (b) demonstrated borderline or clinical levels of aggressive, noncompliant, anxious, or depressed behaviors indicated by the teacher report on the Child Behavior Checklist. None of the children chosen had any significant sensory impairments or a previous diagnosis of mental retardation, behavior disorder, or any pervasive developmental disorders.

All assessment, baseline, and intervention sessions took place in a conference room of a federally subsidized childcare center, which all the students attended. The small room was carpeted and contained no furniture. Play materials used during baseline and intervention sessions included dramatic play toys (i.e., kitchen toys), role-play materials (i.e., clothing, objects), and manipulative toys (i.e. cars, blocks, trains). All sessions occurred during the morning. Two child interventionists conducted baseline and intervention sessions. Both interventionists were women had several years of intervention research experience with young children. A camcorder was used to record all sessions.

The researchers used a multiple baseline design across three dyads. Within the three dyads the children were taught to (a) plan their play, (b) use conversational social interaction strategies, and (c) self-evaluate play interactions. Following the logic of multiple baseline design, each successive dyad had increasingly longer baselines. Treatment was introduced to the second dyad when clear effects of the intervention had been established for both children in the first dyad; treatment was introduced to the third dyad when effects were evident in the second dyad (Craig & Kaiser, 2002).

The data was recorded from the videotapes of the sessions. The child social-communicative behaviors were coded as descriptive or as request utterances. Each category consisted of several types of behaviors and utterances. Descriptive utterances included (a) peer-directed comments, (b) play organizer statements, and (c) acknowledgment responses. Request utterances included (a) information requests, (b) yes-no questions, (c) action and stop-action requests, and (d) clarification requests. The preschoolers' play was coded separately using the Peer Play Code (Craig-Unkefer, 1998). The children's play was categorized into six types: aggression, solitary, onlooker, parallel play, associative play, and cooperative play.

The researchers obtained interobserver agreement by training the two interventionists that worked with the students and a master's level student to code the tapes according to the set criterion. The coders reached 80% agreement during five successive practice sessions. Fidelity of treatment was evaluated for 20% of the intervention sessions. Interventionist 1 completed the

fidelity of treatment checks for Interventionist 2 and vice versa. The average treatment fidelity score across dyads was 93%. The researchers found that the number of social-communicative behaviors increased following introduction of the intervention. The preschoolers' use of descriptive and request utterances during play sessions also increased following the intervention phase. There were also increases in the preschoolers' linguistic complexity and in the diversity of their play.

Nowicki and Duke (1992) studied children's nonverbal decoding abilities and their popularity, locus of control, and academic achievement. In spite of our ability as humans to develop an increasingly complex verbal language, nonverbal communication remains central to social interaction because of its power to convey unique and valid information about emotional states (Nowicki & Duke, 1992). Children who do not master the skills of non-verbal communication are at risk for becoming less popular, for developing external control expectancies, and for performing below their academic potential (Nowicki & Duke, 1992).

This study examined how children's abilities to decode the emotional meanings in facial expressions and tones of voice affected their popularity, locus of control, and academic achievement. The participants of the study were 456 first through fifth-grade students attending private, Roman Catholic schools in a large, southern city in the United States. The children were primarily white and from middle class families.

The children were given tests that measured their abilities to decode emotions in facial expressions and tones of voice. The facial expression test consisted of 20 slides of facial expressions. There were four slides of each type of emotion: happy, sad, angry, and fearful. There were also four neutral slides. The tones of voice test consisted of a 10-year-old female model saying, "I am going out of the room now, and I will be back later" in a manner that reflected one of four basic emotions: happiness, sadness, anger, and fear. The children's locus of control was determined using the Nowicki-Strickland Internal-External Locus of Control Scale for preschool and primary students (Nowicki & Duke, 1989b). The children's level of academic achievement was determined through the evaluation of the students' scores on the Comprehensive Tests of Basic Skills, which was previously administered to the students, and in the students' school records.

The researchers found that less accurate processing of information regarding facial expressions and tones of voice was related to receiving fewer votes for being liked by peers and more votes for not being liked by peers. The same relations were found for tones of voice. The researchers also found that less accurate processing of the meanings of facial expressions was related to higher scores for external control. Finally, the correlations between the students' accuracy in interpreting emotion in facial expressions and tones of voice and the students' scores on the Comprehensive Tests of Basic Skills, showed that less accurate processing of nonverbal information related to lower academic achievement. These results support the importance of nonverbal communication in the interpersonal functioning of children. The results of this study show that children who do not interpret nonverbal social information accurately are more likely than children who interpret nonverbal information accurately to be unpopular, to be externally controlled, and to perform less well academically.

The researchers noted a limitation to this study. They stated that there was a lack of adequate procedures for measuring nonverbal social processing abilities and the personal functioning of children. They also mentioned that thus far, researchers have tended either to use adult subjects or to use adult procedures and stimuli to test children.

Sherburne, Utley, McConnell and Gannon (1998) were interested in decreasing violent or aggressive theme play among preschool children with behavior disorders. Decreasing violent or aggressive theme play among preschool children with behavior disorders has become a topic of concern in recent years. This concern is based on mounting evidence that rates of verbal and physical aggression by children may be increased by viewing aggressive or violent acts and by toys and games that represent violent or aggressive themes. It is undoubtedly also due to incidences such as the one that occurred at Columbine High School.

The purpose of this study was to compare the effectiveness of two free play management procedures (contingency statements and verbal prompts) for reducing violent or aggressive theme play behaviors. Eleven children, three girls and eight boys between the ages 3 and 5 participated in this study. The children were enrolled in a preschool program, Project PREP (Preparation for Regular Education Placement) in Pittsburgh, Pennsylvania. The children met the Project PREP entrance criterion of prior exclusion from one or more mainstream preschool or day care centers because of problems in their social behavior.

The study was conducted daily during two 20-minute free play periods. During these periods, children were free to choose from a variety of common preschool toys (trucks, dolls, and blocks, etc.) and to introduce their own play themes. Toys suggesting violent or aggressive theme play (e.g., play guns) were specifically excluded. Two classroom teachers supervised these periods maintaining safe and careful play. The violent or aggressive theme behaviors recorded defined by Sherburne, Utley, McConnell, and Gannon (1998) as follows:

1. Play about cartoons, television, or movies that was destructive aggressive in content, accompanied by verbalizations that made direct mention of injury, death, or destruction
2. Use of toys, writing implements, or body parts as weapons (i.e., guns, swords, light sabers), thematically causing death, injury, or destruction, accompanied by any gestures (pointing weapon at peer or object) and words or imitations of noises produced by the instrument.
3. Any verbalization to self, others, or a group imitating the sound of exploding bombs or gunfire; or verbalizations about the use, design, or action of weapons.
4. Any mention of destructive/aggressive items or themes in the course of play (i.e., guns, death, killing, bombing).
5. Initiation and offers to begin or continue violent or aggressive theme play or other dramatic play activities that centered around the themes of death, injury, killing, nuclear war, or similar topics.

6. Physical aggression was not included in this measure.

Data were collected throughout each 20-minute free play session by one of the two supervising teachers. Occurrences of violent or aggressive theme play as described above were recorded using a whole-interval time-sampling procedure. Each minute, a 5-second scan was conducted, and instances of occurrence (+) or nonoccurrence (-) of violent or aggressive theme play were recorded. The scan was conducted during the first 5-seconds of each minute, with the observer looking right to left as the stopwatch indicated the passage of 5 seconds. The researchers obtained interobserver agreement by having the second classroom teacher also record occurrences of violent or aggressive theme play simultaneously but independently during 10% of the observation sessions across all phases of the study. Interobserver agreement was calculated at an average of 96% for all assessments.

The experimental design was alternating-treatments design in the form of ABAC. An initial baseline phase (A) was completed to assess rates of violent or aggressive theme play without specific intervention. Both verbal prompts and verbal contingency statements were then introduced on the first day of treatment (B). The verbal prompts intervention was implemented during one free play period and contingency statements intervention was implemented during the other free play period each day. Assignment of intervention was random and the preschoolers had no knowledge of which treatment procedure was in effect until the free play period began. After 31 days of alternating treatments, both interventions were withdrawn to assess the effects of the interventions relative to baseline data. Finally, the more effective intervention, contingency statements, was implemented in both daily free play periods to replicate treatment effects (C).

The researchers found that the levels of aggressive play dropped dramatically as a result of the interventions. Levels of violent or aggressive theme play in the first baseline condition averaged 55% of the scans. The percent of occurrences of violent or aggressive theme play during the contingency statements intervention dropped to an average of 6%. The percent of occurrences of violent or aggressive theme play during verbal prompts intervention dropped to an average of 20%. The results of this study show the effectiveness of both interventions as compared with baseline conditions. It was discovered that the contingency statement strategy was more effective than the verbal prompt strategy.

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Social Behavior Change in Schools

The Effects of Self-Monitoring on Self-Management for Students with Disabilities

by

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Research indicates that self-management techniques are an effective means for improving behaviors for all students. Virtually 300 self-management studies or applications have been reported over the past three decades. This research has provided documentation that self-management has been effectively employed across a wide range of participants, locations, and variables for children with and without special needs (Smith & Sugai, 2000). Over the years self-management techniques have been utilized for children with emotional and behavioral disorders (Smith & Sugai, 2000), autism (Barry & Singer, 2001), mental retardation (Barry & Santarelli, 2000), for children diagnosed with ADHD (Hinshaw & Melnick, 1992; Shapiro, DuPaul, & Bradley-Klug, 1998; Shimabukuro, Parker, Jenkins, & Edelen-Smith, 1999) and for general education adolescents (Blick, D. W., & Test, D. W.). A growing percentage of these studies, particularly the body of research in the last decade, is investigating the application of self-management in school-based settings with students at risk for school failure because of low academic achievement or disruptive behavior in the classroom. The focus of this review is to examine selective studies in which self-management was applied in school-based settings to promote academic and behavioral skills in students with disabilities.

Studies reported in this review were located from various sources including the following:(a) a search of the Psych-Lit and ERIC databases from 1974 to the present using the descriptors self-monitoring, self-management, or self-recording and behavioral self control; and (b) studies reported in previous reviews.

Research Questions

In this literature review, three major questions were posed.

1. To what extent have researchers investigated the use of self-management techniques by students with disabilities?
2. How have these self-management strategies been implemented (e.g., specific procedures used, participants and types of disabilities selected, and outcome variables targeted)?
3. How effective have self-management strategies been in advancing academic and social outcomes for students with disabilities?

Brief History and Terminology

By the early 1970's, behavioral self-control (BSC) was one of the first behavioral interventions to appear on the educational landscape and in research literature. Self-monitoring was initially created as a non-intrusive clinical assessment strategy founded on cognitive-behavioral models that underscored to varying degrees the reactive effects of cognitive and behavioral factors (e.g., awareness and self-talk, antecedents, observable actions, and consequences) (Kanfer & Karoly, 1972a, 1972b; Rachlin, 1974; Skinner, 1953). However, clinicians quickly recognized that self-monitoring frequently produced a modification in behavior. This change in behavior, coined

“reactivity”, resulted in the application of self-monitoring interventions using an extensive selection of behaviors (Mace & Kratochwill, 1988).

Researchers began to explore the effectiveness of self-monitoring strategies with children in educational settings. Starting with Broden, Hall, and Mitts's (1971) classic study and continuing with Glynn and colleagues' (Glynn & Thomas, 1974; Glynn, Thomas, & Shee, 1973) investigations, researchers commenced to exhibit the prospective efficacy of self-monitoring interventions in the general education setting. The successes of these early investigations motivated researchers to further explore self-monitoring interventions with populations with disabilities. Nearly fifteen years later, researchers began to employ the favored term of behavioral self-management. This alteration of terms resulted in the supposed negative connotation of the word “control”, rather than significant theoretical alterations. More recently, researchers have increasingly utilized idioms such as self-management, self-monitoring and self-recording.

Although there were many to choose from, five studies were selected to be included in this review. Of the five studies, four were designed to specifically meet the needs of children with Attention Deficit/Hyperactivity Disorder. Attention-deficit/hyperactivity disorder (ADHD) is the most frequently diagnosed neurobehavioral disorder today (Frazier & Merrell, 1997) with almost 3.8 million children diagnosed with it in the United States. Children diagnosed with ADHD display impulsivity, hyperactivity, and difficulty sustaining attention (American Psychiatric Association, 1994). These indicators are challenging in classroom locations where teachers view self-regulation, sitting still, and steady focus on specific tasks as essential school readiness skills (Bussing, Gary, Leon, Wilson, & Reid, 2002; Clancy, 2002).

There is research to substantiate that ADHD may be genetically connected with discrepancies in neurological performance and impairment of neurotransmitters in the central nervous system (Ballard et al., 1997; Chatfield, 2002). As a result, the majority of children diagnosed with ADHD take psycho-stimulants that imitate precise neurotransmitters to manage symptoms (Chatfield, 2002; Knight & Rappaport, 1999). According to classroom teachers, although the treatment of psycho-stimulants may decrease indications of ADHD, problem behaviors from students diagnosed with ADHD (Bussing et al., 2002) still persist. The realities of life (Thiruchelvam, Charach, & Schachar, 2001) are often reconciled by the pledge of limited or reduced symptoms that psycho-stimulants have to offer. Parents may not remember to provide the medication on occasion, or children may forget to obtain the medication (Firestone, 1982; Thiruchelvam et al., 2001). Many psycho-stimulants contain specific directions for administration, which may cause nausea and other symptoms that affect behavior if not expressly followed (Perring, 1997). Depending on the dosage prescribed, symptoms may begin to resurface at unfavorable times during day (Pelham, Aronoff, & Midlam, 1999). Some parents merely favor not giving psycho-stimulants to their children at all (Reichert, 2000). Regardless, it is our responsibility as educators to acknowledge these children's needs in our classrooms and discover strategies that will facilitate their learning process.

Drug therapy is efficient at reducing symptoms of ADHD for many children (Chatfield, 2002). However, many of these children may persist in displaying behavioral difficulties in the classroom setting that probably have a negative impact on academics and overall classroom management (Bussing et al., 2002). By providing behavioral interventions, such as self-

management techniques, in the classroom setting, educators may enable students with ADHD to succeed (Pelham et al., 2000; Turnbull, Wilcox, Stowe, & Turnbull, 2001). Self-management is a behavioral intervention that teaches individuals to distinguish their own behaviors and create behavioral goals for themselves. This includes identifying specifically which behaviors need to be increased and decreased, recording and reinforcing their own behaviors (Koegel, Koegel, & Parks, 1995). Self-management necessitates that the individual concentrate on his or her behavior and examine it precisely, in order to earn reinforcement. Slusarek, Veiling, Bunk, and Eggers (2001) established the aptitude of children diagnosed with ADHD to conquer their lack of inhibitory control when under exceedingly reinforced conditions. Offering children diagnosed with ADHD the use of frequent reinforcement in the behavior-consequence relationship entrenched in self-management, may be a way of overcoming some of the indicative behaviors related with the disorder. Therefore, the combination of psycho-stimulants and behavioral intervention is more operative for most children at controlling symptoms than the singular treatment of psycho-stimulants alone (Pelham et al, 2000). Educators need to learn how to apply self-management approaches that enable students with ADHD be productive in their school settings (Bussing et al., 2002). The combination of both psycho-stimulants and behavioral interventions affords more control of symptoms of ADHD than using psycho-stimulants alone (Pelham et al., 2000).

Shimabukuro, Prater, Jenkins, and Edelen-Smith (1999) investigated the effects of self-monitoring on the academic performance, on task behavior and accuracy of students diagnosed with learning disabilities and ADD/ADHD. They studied three males, one 6th grader and two 7th graders, all of average intelligence with difficult attentional behaviors during academics. The students were educated in a self-contained, mixed grade class in a private school. Intensive instruction on self-monitoring procedure was given to each participating student. The measurable dimensions of the students' target behaviors were: a) academic accuracy, b) academic productivity c) on-task behavior. Single-subject study, ABA multiple baseline across three academic areas was the experimental design chosen as the method of analysis. Phase one was baseline-data collection without self-monitoring, phase two was intervention-training and implementation of self-monitoring; and phase three was baseline-data collection without self-monitoring. There was a 94% mean inter-observer agreement across all sessions. The range of inter-observer agreement from the lowest to highest was 86% to 100%. The study indicated that all three students self-monitoring skills increased their academic productivity, academic accuracy and on-task behavior ranging from 34 to 39 %. This study included dually diagnosed students who learned, employed and demonstrated success using self-monitoring techniques which proves the results of this study were educationally significant. The process in this study could be effortlessly incorporated into an already existing behavior modification procedure or established singularly. By training the students to self-monitor, this would free up time for the instructor.

According to Mathes and Bender (1997) who studied the effect of utilizing self-monitoring technique to enhance on-task behavior of students with attention-deficit/hyperactivity disorder who are already receiving pharmacological treatment, self-monitoring is a successful tool. Three male participants in grades 3, 4 and 5; aged 8-11 years old with low to average IQ were involved in this study. The teaching procedures consisted of training the students in self-monitoring techniques using a tape recorder and a self-monitoring sheet. The dependent variable for the study was on-task behavior. A single-subject, ABA research design was utilized. Baseline-data was gathered until stable data were observed; there was no intervention other than usual support systems for every student. Establishing baseline for each student was done at separate times in a resource

room. The teacher trained each student to self-monitor according to specific procedures. The use of the recording and data sheet was role-played. After 10 days of intervention, the cueing tape was removed. This lasted for 3 days. Next, removal of the self-monitoring sheet occurred. Lastly, a return to the first fading phase occurred, where just the recording sheet is utilized. Ten sessions were recorded for inter-observer reliability with a percentage of agreement between 88% to 98% and a 94% mean agreement across all sessions. On-task behavior for all three students improved during the intervention phase, and remained higher than baseline throughout the subsequent phases. The improvement was meaningful in that the data indicated that the self-monitoring procedures were effective for increasing on-task behavior for the students already on pharmacological treatments which, alone did not result in on-task behavior. This data is relevant to any teacher who may suspect that if a particular child just had medication, he/she would be attentive. It is imperative to take note of behaviors of students on pharmacological treatment and not expect it to be the cure all ends all.

Shapiro, DuPaul, & Bradley-Klug (1998) analyzed case studies of two sixth grade male students diagnosed with LD and ADHD, utilizing the application of self-management strategies for improving classroom behavior. After learning the rating system in their classroom, the intervention focuses on teaching the students to rate their own behavior and their teachers' acceptance levels. The target behaviors were as follows: (a) prepared for class, (b) completing assignments, (c) following directions first time asked, (d) staying on task, and (e) using appropriate language. Employing the experimental design: ABCD a four phase, single subject design was followed: (1) baseline-data collection, (2) no intervention; teacher management-teacher rates student and informs student of rating; (3) matching-student rates own behavior, compares with teacher rating; (4) fading-fade to self-management (all accumulated points were turned in for back up reinforcers). Results determined that the behavior of each student improved substantially during the intervention and the follow-up. Empirical basis has not been established since the ABCD design does not return to baseline. The meaningful improvement for both students provided insight and reasonable discussion ideas. This study could be easily replicated if a school had the appropriate support team. Educators may be able to adapt the technique into their program, but would need to train all the students in the procedure. Really wouldn't be feasible to use the approach with just one student, since many teachers already have very elaborate behavior modification systems in place.

Barry and Messer (2003) conducted a study with five Caucasian sixth grade male students diagnosed with, and taking psycho-stimulants for, ADHD symptoms. The students were enrolled in the general education setting in a public school. Self-management techniques to monitor academic performance, on-task behavior and disruptive behavior were taught to the subjects. The empirical assessment utilized was a multiple baseline design across students, with intervention withdrawal embedded within each baseline. A decrease in disruptive behavior along with increases in on-task behaviors and academic performance was compared across phases. Initially, each participant met with the classroom teacher for a twenty minute conference in order to define target behaviors to increase or decrease. Reinforcement menus were reviewed and modified at this time. Three behaviors were targeted as follows: on-task (seated at appropriate place at correct time, paying attention), disruptive behavior (physical play, fighting involving physical contact, loud noises, yelling), and academic performance (point system based on correct and completed answers/assignments). The ABABAB design was used with a multiple baseline plan across five students on three dependent variables. Intervention then withdrawal was embedded within each baseline to allow an empirical assessment of the effectiveness of self-management. During the A

phase, teacher-only monitoring of behavior was utilized. Phase B incorporated student management of behavior as well as teacher monitoring for feedback and inter-observer agreement. Data collection procedures included partial and whole fifteen minute interval recordings. The range of inter-observer agreement was 93% to 99% for each variable and 95% across all observations. Problem behaviors for each participant were reduced, while academic performance was increased during the intervention phases, which substantiates educational significance as well as verification that the self-monitoring was controlling the targeted behaviors. This study offers further confirmation for the positive use of self-management techniques with a population of students with disabilities.

Todd, Horner, and Sugai (1999) examined the relationship between self-monitoring with self-recruited attention and challenging behaviors, off task behavior, teacher perception of student performance, task completion and frequency of teacher praise. Utilizing an ABACA approach, the study consisted of a functional assessment, then enforced withdrawal and multiple baseline design elements across two conditions; baseline and self-management. There was one 9 year old, fourth grade male student with a learning disability and an average IQ of 94 who participated in this study. The student was taught to exercise self-monitoring, self-evaluation and self-recruitment of stickers for reinforcement for his on-task and problem behaviors. Data collection using partial interval and frequency was reported. The results indicated an increase in all the target behaviors and that this was functionally related to the interventions as demonstrated by the return to baseline condition. Thus it was educationally significant in that the student's behavior improved.

Benefits of Self-Management

Despite the differences in terminology, researchers acknowledged positive effects for self-management components including self-instruction (Agran & Martella, 1991), self-reinforcement (Blount & Stokes, 1984), and self-monitoring (Reid, 1996; Webber, Scheuermann, McCall, & Coleman, 1993). Outcomes from separate studies also verified that self-management components enhanced an assortment of results, such as on-task behavior (Blick & Test, 1987; Hallahan, Marshall, & Lloyd, 1981; McCarl, Svobodny, & Baere, 1991), social skills (Agran, Salzberg, & Stowitschek, 1987), classroom disruptions (Kehle, Clark, Jenson, & Wampold, 1986), spelling performance (Harris, 1986), math calculations (Heins, Lloyd, & Hallahan, 1986), homework completion (Fish & Mendola, 1986), independent performance (Lagomarcino & Rusch, 1989), creative writing (Glomb & West, 1990), and story composition (Martin & Manno, 1995).

The primary beneficial goal of self-management strategies is independent use of competent skills across contexts, settings, and materials. When devising individualized support plans for students in managing their behavior, self-management is an effective and regularly utilized instructional strategy in the classroom (Hughes, Korinek, & Gorman, 1991; Todd, Horner, & Sugai, 1999). For students requiring individualized programs, self-management procedures provide the prompts required for a student to independently accomplish a task or routine (Craft, Alber, & Heward, 1998). Self-management can be utilized in all areas including homework completion, monitoring appropriate behavior, and academic progress (Hughes et al., 1991; Kanfer & Karoly, 1982; Shimabukuro, Prater, Jenkins, & Edelen-Smith, 1999). Combining self-management strategies produces more resilient behavior change and facilitates enduring interventions than solely employing any one technique (Alberto & Troutman, 1999; Todd, Horner, & Sugai, 1999). It is a clear benefit of self-management is that it endorses autonomy, responsibility

and personal control over behavior by teaching students how to employ behavioral interventions for self-treatment.

Summary and Conclusions

The amount of research in the use of self-management procedures with students with disabilities has increased steadily. This review points out that investigators have begun to consider the use of self-management as a strategy to improve the functioning of students with disabilities in general education settings. The principal objective of this review was to explain how a classroom teacher could execute a self-management plan in a general education classroom setting with children diagnosed with ADHD. These school-based studies verify the functional control of targeted behavioral skills and support the efficacy of self-management to improve student behavioral outcomes. In conclusion, this review proposes prospects for representing further provisions for the probable benefits of self-management interventions for students diagnosed with disabilities.

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Conduct Disorder and Interventions: A Literature Review

by

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Most parents have experienced conduct related problems with their child at some point during their developmental growth. However, the label of conduct disorder (CD) is only given when the child's disruptive behavior infringes on the personal property and rights of others, age-appropriate societal norms are violated, or their severe behavior impairs their daily functioning at home and in school. The Diagnostic and Statistical Manual of Mental Disorders: Fourth Edition (DSM-IV) categorizes conduct disorder into four main groupings: aggressive conduct that causes physical harm to other people or animals, non-aggressive conduct that causes property loss or damage, deceitfulness or theft, and serious violations of rules. In order to receive a diagnosis of CD, three or more characteristic behaviors must be present during the last twelve months, with at least one behavior present for at least six months.

In the absence of treatment, the long-term outlook for children with CD is very poor. Early forms of CD are predictive of problems later in life such as school drop out, alcoholism, drug abuse, juvenile delinquency, adult crime, antisocial personality, interpersonal problems, and poor mental health. It is widely accepted that multiple influences and factors contribute to the development and eminence of CD in young children. This literature review will include articles that discuss some possible interventions or treatment approaches that detail certain strategies and interventions for helping reduce or prevent further development of conduct disorders in children.

Webster-Stratton (1993) reviewed a variety of studies that indicate many promising and innovative interventions for helping reduce and prevent further development of CD in young children. Preschool and early grade schools appear to be particularly strategic times to facilitate children's social competence and conflict resolution skills in early intervention and prevention programs. However, the most successful programs are those that target multiple symptoms of CD across risk factors, settings, and agents. Active partnerships between parents and schools are necessary in order for the intervention to be effective.

Specific family characteristics have been found to contribute to the development and maintenance of child conduct disorder. Family based behavioral intervention programs can teach parents a step-by-step on to deal with their aggressive child. Each newly learned skill forms the foundation for the next skill to be learned. For example, the Patterson's parent treatment approach that has had very promising results teaches how to pinpoint the problem behaviors of concern and to track them at home. Second, parents are taught social and tangible reinforcement techniques. Over time, the tangible reinforces are replaced by the parents' social reinforcement. Third, parents are taught proper discipline procedures. For example, when parents see their child misbehaving they learn to apply a mild consequence. Fourth, they are taught to monitor, meaning knowing where their children are at all times. These guidelines are part of the many parent programs that are trying to teach effective methods of dealing with a noncompliant child.

Limitations of the parent training programs are failure of child improvements brought on by the training to go beyond the home into school and peer relationships. Thirty to fifty percent of the children continue to have significant school problems such as social acceptance, conduct

problems, and academic underachievement. Also parent-training programs rarely address academic skills difficulties that have been linked to CD. Parents need to know not only how to help their children but also how to teach and support them regarding their academic deficits and create a supportive relationship between the home and school environments. Finally, a third limitation is the possibility that parents refuse to participate either because of their own dysfunction, have given up, or not motivated to change their child's behaviors.

A variety of innovative child training programs have been created to coach children in positive social, cognitive, and behavioral skills. These methods include verbal instructions, opportunities to practice the skills with peers, role-playing, games, stories, and therapist feedback and reinforcement. Most of these programs are school-based and time-limited (4-12 weeks). Rather surprisingly the programs do not involve the parents in the training which is an advantage for those children whose parents discussed previously who are reluctant or unwilling to participate in a parent-training program.

However, the child-training programs studies indicated less convincing and less compelling results. Most of the studies were conducted with middle grade school children or adolescents who have had five to ten years experience in negative relationships with peer groups and teachers. These students' negative reputations and social rejection by their peer groups make it much more difficult for these children to utilize these appropriate skills and change their image. A second possible reason for the lack of effectiveness is that most of these programs do not specifically focus on problems of aggression and noncompliance in children with CD; nor do these address academic problems. Putting exclusive focus only on the child limits the likelihood any positive effects being generalized across settings.

Once the child with conduct disorder begins school, any negative school or social experiences can further aggravate their adjustment difficulties. Their disruptive behaviors can cause poor relations with teachers, receive less support and nurturing in the school environment, and due to their aggressive behaviors, peers may reject them during the school years. Researchers recommend a healthy, interconnected relationship between the parents and schools, child and school, and parents and teachers. The preschool period and early school grades appear to be an optimal time for school personnel (teachers, school psychologists) to initiate early identification and to intervene with preventive and corrective programs. Also poor academic performances, such as reading disabilities and language delays, have been implicated in child conduct disorder. It is clear that the combination of poor reading skills and conduct problems places the child at a high risk for low-self esteem, continued academic failure, further behavior difficulties, and dropping out of school.

In conclusion biological, neither family, nor school factors alone account for the development of CD and by the time the symptoms manifest, all these factors are undeniably interconnected. Three broad types of programs should be considered: family focused and aimed at training the parents to act as the change agents, child focused and aimed at treating the child, and school focused and aimed at training the teachers to bring about child improvements.

Short and Shapiro (1993) reviewed key findings in the long-term outlook of four intervention strategies to prevent or treat conduct disorder: (1) parent and family targeted programs, (2) social-cognitive programs, (3) peer and school-based programs, and (4) community programs. The author explained that conduct problems predict antisocial behavior, alcohol abuse,

and drug dependence in adulthood, which is stronger in males than females. Therefore, it is vital that conduct problems in childhood be addressed and dealt with appropriately before the situation gets more severe.

Familial interventions involve parent management training. The training aims to teach parents how to promote prosocial behaviors in their child while at the same time applying discipline to minimize maladaptive behaviors. Substantial evidence regarding short-term effectiveness in clinical populations is available and has shown great potential. However, the data reveals that parent training has shown moderate outcomes, specifically in parent characteristics and family social circumstances. Most studies were conducted under ideal settings, and further studies are needed in non-clinical populations and long-term assessments. Another major limitation of parent management training is parental compliance. Parents and family play a huge role in the child's developmental life. It is important that investigators come up with ways to increase the motivations and ability of parents to participate in order to enhance the interventions and results.

Social-cognitive interventions focus on the relationship between cognition, emotion, and behavior. The assumption is that changing or enhancing thoughts and affect will lead to social competence and positive behavioral adjustment. A wide variety of intervention approaches have been developed including problem-solving skills, anger control, coping skills, and social skills. The effectiveness of social-cognitive interventions is difficult to interpret because of the tremendous heterogeneity of children studied, range of intervention content, and instructional methods. A systematic review that categorizes studies according to adjusted versus maladjusted students, type and severity of preexisting behavioral disorder, and age group as well as the strength of the study design may reveal that the variations in the findings. Extensive reviews have concluded that evidence for effectiveness is mixed and that the link between cognitive change and behavioral change has not been demonstrated. Further evaluations need to be made for analyzing the impact of the social-cognitive approach.

The third type of intervention focuses on the role of peer relations and schools in the development of conduct disorder and antisocial behavior. There is evidence that peer relations and school performance are primary factors that leads to the development of undesirable behavior during childhood. Interventions are directed in improving peer relations through social skills training in reducing aggressive behavior and prevent the development of maladjusted conduct.

Community based interventions are services that are provided at the community level. The goal is to strengthen the ability of the community to promote positive behavior and deter antisocial behavior through changing or enhancing existing systems. A number of promising approaches have been tried at the community level, but there is little documented evidence of effectiveness. Regardless, community based primary intervention should be complementary to other intervention programs in the clinical and school settings. An important advantage of community interventions is the availability to everyone, which increases the likelihood of reaching every child who needs assistance. They also provide an opportunity for problem children to interact with normal peers in mixed-gender settings.

Overall, the available literature provides limited evidence for the effectiveness of either primary or secondary intervention. There is a need to increase the scientific studies based on prevention and intervention. Studies are needed in representative samples of children with or at

risk for CD. Most of the studies have been conducted in clinical settings with severely impaired children. In addition, randomized research designs that compare similar groups who receive or don't receive the intervention under investigation approach are needed to determine the success of the interventions. Finally the intervention approach must be derived from empirically derived theories, designed to be used in the real world, and allow others to replicate the study. Prevention is the key that must begin in early childhood and continue through adolescence and beyond as an ongoing process.

Hester and Kaiser (1998) explain that conduct disorder (CD) is the most prevalent childhood behavioral disorder, occurring in approximately 5% to 10% of the total population of school-aged children and more frequently among children from disadvantage environments. CD usually develops in the context of multiple determinants. Parent and child characteristics, the dynamics of the interaction between the parent and child, and how the interaction is impacted by social, economic, and cultural circumstances of the family play a major role in conduct disorder. To have a successful intervention these critical factors must be addressed: (1) early identification of children at risk, (2) intervention in multiple settings, (3) teaching developmentally appropriate skills, (4) continued maintenance training for parents and children, and (5) support transition to parents and teachers as children move into different grade levels.

Early identification of a child who exhibits symptoms of conduct disorder can provide certain challenges for researchers. When using anecdotal report measures, parents and teachers may vary in their identification of children with behavior problems for several reasons. First, parents and teachers may have different standards and tolerances for young children's behavior. Second, children may behave differently at home and in the classroom. Third, parents and teachers may be reluctant to label the child as having a conduct disorder because of the social stigmatizations. Other barriers are working with parents who are in disadvantaged circumstances. Economic constraints, such as lack of transportation, can greatly affect a family's ability to participate in an intervention program. Inconsistencies with attendance will greatly the immediate effectiveness of the parent training. The conditions that make the child at risk for CD includes single parent status, disorganized homes, lack of education and job skills, substance abuse, and marital conflict. These are the same factors why troubled families are less likely to participate.

The main strategies for effective intervention with parents are to improve the child's language skills and family interactions. The pivotal people in this intervention model are the parents or other adult family members such as grandparents. Parent training is best viewed as a collaborative relationship in which the parent trainer draws upon each parent's unique strengths, skills, and beliefs. By designing strategies that take into account the parent's perspective and individual circumstance, the parent trainer can maximize that parent's commitment. An intensive multicomponent intervention requires considerable time and personnel. The long-term effect of this type of intervention ultimately determines the efficacy. In the first year of the longitudinal study, the researchers developed some understanding of the barriers to participation for families at high risk and the change patterns of parent-child interactions.

Offord and Bennett (1994) defined conduct disorder is a chronic, severe antisocial behavior that typically begins in early childhood and extends to adulthood. The disorder is relatively common, well documented, and has proven to be difficult to treat successfully. The syndrome may be an enduring condition requiring continuous monitoring and maintenance to gain and sustain

treatment progress. Therefore, a successful intervention will require collaboration and coordination across a number of settings and among the community agencies serving these children. Recent research has noted that parent training, family interventions, problem-solving training, and community-based programs have some effectiveness in remedying some of the behaviors associated with CD. These researchers focused on the relationship between conduct disorders and the schools. The connection between conduct disorders and poor academic achievement has been well demonstrated and has important implications for schools.

Parent and teacher responses to difficult behavior may shape later responses by the child towards even more aggressive, disruptive behavior. The most significant family factors in relation to CD are parent-child interactions and parent management practices. Parent interactions in these families are usually predominantly negative, particularly in response to negative behaviors. Given the critical role that parents play in the development as well as the treatment of conduct disorders, schools can offer school based interventions such as academic and parenting management for parents. Formal recognition and attention in identifying and intervening with children who exhibit symptoms of CD is significant to the schools and society. The syndrome represents a substantial financial, emotional, educational, and environment strain due to the prevalence, intensity, and prognosis associated with the disorder.

Therefore, family and parent interventions may be necessary activities for schools and school psychologists to focus on allowing school boundaries to become more flexible for parents and community members. Formal school services for children with CD who qualify for special education typically have been limited to classrooms for children as severely emotionally handicapped (SEH). Those children that don't qualify for SEH continue to do poorly on academics and are at risk for dropping out, expulsion, or placed in an alternative school. It is critical that there is coordination and involvement between parents, community agencies, and school personnel.

Chamberlain and Rosicky-Gilbert (1995) noted that as any child enters adolescence, parenting becomes more complex. If the child also has a conduct disorder, existing problems may become much more adverse. Peer relations play an increasingly important role in a teenager's life and the parental influence may decrease. These researchers examined the efficiency of family therapy in the treatment of adolescent conduct disorder. The goal of family interventions is increasing parenting skills and empowering parents with resources to sustain positive changes made during treatment. The three major theories of family interventions that are discussed are social learning family therapy, structural family therapy, and multi-target ecological treatment. Although these three approaches may overlap, they are distinct in term of their theories of the relation of family change and their assumptions about how the family processes intervene adolescent problem behaviors and attitudes.

Social learning family therapy (SLFT) is designed to alter dysfunctional parent-child interactions and focuses on building parental skills in reinforcement, delivering mild forms of discipline, and negotiating compromises. Structural family therapy (SFT) addresses issues of poor family organization, cohesion, and structure. SFT targets aspects of emotional engagement and distancing, shared family beliefs, and a reorganization of family subsystems and hierarchies all adapted to fit culturally specific values and beliefs. Multi-target ecological treatment (MET) combines interventions from both SLFT and SFT as well as treatment approaches based on research outside the family therapy models. MET approaches are based on the assumption that

there are multiple causes within multiple settings, including not only their families, but also peer systems, schools, and communities. Interventions are conducted simultaneously in these multiple settings and are flexible depending on the individual's problem.

Limitations that are found with these approaches are how and when parents are experiencing multiple personal and environmental stressors it might derail their efforts from treatment and make implementation much more difficult. Effectiveness has been associated with three family-related factors: attrition, family stress and lack of social support, and child variables. Families who drop out of treatment have been found in studies to be of low socioeconomic and educational status. In addition to drop out rates, researchers have identified the issue of family resistance to treatment, meaning they lose clients after initial contact, but prior to the first treatment session. Studies have also shown if the parent has a relative or close friend whom they can seek support from, family stress can be somewhat alleviated. In general family interventions have been found to be effective. It's more difficult to implement for children over 12.5 years old than younger cases and for adolescents who engage in both overt and covert conduct problems.

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Decreasing Disruptive Behavior in a Pre-Kindergarten Student with Developmental Delays During Rest Time in an Inclusion Setting

by

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Students whose behavior is disruptive pose a unique challenge to educators. These students not only impede their own learning, but they cause distractions that alter the optimal learning environment for others as well. Disruptive behavior can also lead to peer rejection (Hoff & DuPaul, 1998). This is of special concern in an inclusion classroom where typically developing peers serve as social and educational models for the students with disabilities or delays.

Disruptive behavior has been defined in various ways. Operational definitions focus on the following categories of disruption: aggression, movement, talking out, property destruction, not following directions, swearing, teasing or taunting, throwing, and inappropriate touching (Storey, 1994). Defining disruption in such terms limits subjectivity, as what may be disruptive to one teacher may not be to another.

Recently, research has focused on self-management strategies as an alternative to traditional management approaches (Hoff & DuPaul, 1998). Self-management means that the student is trained to and then responsible for tracking his or her own behavior. It involves the student first learning what is appropriate and inappropriate, and then applying this knowledge to a behavior chart or point system (Koegel, Koegel, Hurley, & Frea, 1992). This method has several advantages. One is that it allows the student to take control of his or her own behavior, making it easier to maintain the change in situations where a teacher or practitioner is not present. Secondly, it relieves the teacher of spending time on data recording. Thirdly, research has shown that behavior changes resulting from self-management have a greater generalization potential than contingency management procedures (Hoff & DuPaul, 1998).

Several studies have demonstrated that self-management procedures reduce students' disruptive behaviors. Storey and others investigated the disruptive behavior of a six-year-old kindergarten child named Kurt. They found that the child's teacher, who had little training in behavior management, was able to identify what behaviors were disruptive in behavioral terms, but unable to identify the function of the behaviors. This is common in classrooms where the focus is on punishment. The rules are written and explained at the beginning of the year before the teacher has had the opportunity to get to know the students. Students learn to avoid punishment by not engaging in these disruptive behaviors (Skinner, Cashwell, & Skinner, 2000).

Storey helped the teacher implement a teacher cued self-monitoring intervention for the child to be used during a daily two-part instructional time. An A-B-A-B Withdrawal Design was used to test the results of the intervention. Kurt was seated near a poster displaying pictures of "appropriate vs. inappropriate" behaviors. Prior to the daily session, Kurt chose something identified as motivating to work towards. Then his teacher briefly reviewed the poster. During 20 minutes of large instruction and 20 minutes of individual seat work, a bell recorded on a cassette sounded every 2 minutes, and Kurt had to mark his chart (on desk) if he was behaving appropriately. This intervention was easily implemented in the classroom setting. A withdrawal

period confirmed that the intervention was the reason for the behavior change. Observations confirmed a statistically significant decrease in disruptive behaviors during those parts of the day. Although this study lacked generalization across settings and substantial maintenance data, it demonstrated that he could be made aware of his behavior and manage it during instructional times.

Hoff and DuPaul examined the efficacy of self-management to see if it decreased disruptive behaviors in three nine-year-old students identified as "at risk" for later conduct disorders (Hoff & DuPaul, 1998). This study used a multiple baseline across two settings (two classroom settings and one playground setting). The three students were trained to identify what was "appropriate" and "inappropriate" behavior. They were taught to rate their behavior after 5-minute intervals on a scale of 1-5. Initially, these ratings were compared to the teacher's ratings after every 15 minutes and the teacher offered feedback as to why she rated them as she did. If the student's ratings matched hers, they could keep those points they gave themselves to earn additional computer time or a homework pass. After the students and the teacher's ratings began to match, the teacher matching phase was faded out and the students were rating themselves on their own. The results showed that the students decreased their disruptive behavior in both the classroom and the playground setting to a point that resembled that of their peers. These findings suggest that self-management could be used in elementary aged children. This study was limited by the fact that short time periods were used (15 min.). The authors suggest that self-management should be tested with elementary school children for a longer amount of time to see if the same findings hold true.

Koegel, Koegel, Hurley, & Frey (1992) studied four 6-11 year old autistic boys demonstrated that self-management could be used to help the children record their positive or pro-social interactions. The parents reported that they exhibited disruptive behavior such as tantrums and aggression. They were also not answering appropriately when asked questions by various people both at school and at home. Sessions were conducted in the context of a multiple baseline design across settings and subjects with a withdrawal for two of the subjects. A baseline period confirmed that the subjects were exhibiting disruptive behaviors. In a laboratory setting, the children were taught about what was appropriate and what was inappropriate. They were given an inexpensive wristband counter (the kind used in golf) and taught to click the counter when they behaved appropriately. Then for a brief period, children were reinforced for behaving appropriately with a food item that they enjoyed. To teach independence the children were encouraged to take their own reinforcers out of the bag when the counter reached a certain number. When the self-mediation was introduced at home and at school, all four children showed rapid improvement. In addition, during the withdrawal period for the two subjects selected a decrease of appropriate responding resulted. Observations in the community setting yielded similar results. These findings are striking because they demonstrate a significant drop in disruptive behaviors of autistic children. The study demonstrates that these measures can be successful in a population of students with disabilities, and that the changes in behavior can be generalized over settings.

Other studies have noted that self-moderation may work simply because the focus is shifting from a negative (punishment) contingency to a positive (self-management being paired with a reinforcer) contingency. "Altering the day-to-day focus from punishing antisocial behavior to reinforcing pro-social behavior" will leave room for less disruptive behavior (Skinner, Cashwell, & Skinner, 2000).

In an A-B-C Functional Analysis involving an 8 year-old student displaying disruptive behavior, the researcher identified that the child was misbehaving in an attempt to avoid work that was difficult for him (Umbriet, 1995). Three things were done: 1) He was moved away from a group of friends where his disruptive behavior was highest, 2) He was given more work that was at his level, and 3) he was told to request a 1-2 minute break whenever he needed one. In this study, the child was able to recognize when he was becoming frustrated and request a break, thereby avoiding behaving in a disruptive manner. It should be noted that he only did this during independent seat work time. Data demonstrated a drop in disruptive behavior from 55%-95% to almost no occurrences of disruptive behavior. Although this study demonstrates a type of self-management, it more strongly demonstrates the need to study the function of the behavior in question.

Early childhood inclusion classrooms have been the focus of intense study for over 25 years. Kohler and Strain (1999) note "the issue of inclusion has led to significant transformations in the field of early childhood education." While research has focused on the advantages of inclusion for populations of preschoolers, little has been studied about disruptive behavior in these settings. I have found no research on using self-management in the early childhood setting, nor have I found any on using such techniques on a young student with disabilities.

In this proposed study, the subject, Jay, is 5 years 1 month old. He has been identified as having an autistic spectrum disorder (mild) and developmental delays. Jay attends school at an early childhood inclusion classroom with three teachers, 12 typically developing students and 5 students with disabilities. His teachers have reported that Jay has a particularly difficult time during the daily 45-minute rest time when he is expected to stay on his mat and engage in a quiet activity. In this study the teacher/researcher will observe Jay to determine the function of his disruptive behavior (shouting, stomping feet, getting off of his mat, and kicking sleeping students) during rest time. Jay's disruptive behavior (as described above) will be recorded in 5-minute intervals during the baseline, intervention, withdrawal, and re-introduction to the intervention phases. The two paraprofessionals (who in this classroom model function as additional teachers) will be trained as raters as well. The duration of time Jay remains on his mat will also be recorded during these phases. An intervention that combines teacher cued self-reporting and positive reinforcement is planned, along with a withdrawal phase to determine if a decrease in Jay's disruptive behavior during rest time occurs. Can a teacher cued self-monitoring intervention result in a decrease of disruptive behavior in a 5-year-old child with autistic spectrum disorder?

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The Effects of a Token Economy with a Response Cost Component on Young Children with Developmental Delays in an After School Care Program

By

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A classroom is a place where students gather to learn. Creating a safe and orderly environment in the classroom is a survival skill for teachers and optimizes the learning environment for students. The strategies teachers use to create such classroom environments have been studied and developed as the area of classroom management for many years. How teachers work with students in the classroom is shaped primarily by what they believe about how students learn how to behave. At one extreme is the belief that students are passive receivers of knowledge who need to learn to conform to the system and require clear identification of a payoff for their learning. The emphasis is on routine and standardization. The other extreme is the belief that students are active, positive, motivated and unique problem solvers. The emphasis is on choice. It is not surprising that teachers tend to use strategies that are congruent with what they believe.

The teacher whose belief is the latter has two significant dispositions. First, she believes misbehavior can be an opportunity for teaching new behavior. This teacher believes that when a child misbehaves, he is communicating the need for help in directing his behavior. Second, she believes that the goal of discipline is not to control a child and make him obey but to give him skills for making decisions, gradually gaining self-control, and being responsible for his own behavior.

Warner and Lynch (2003) discussed in their article, "Classroom problems that don't go away," that serious behavior problems that are not addressed before age eight can have long-lasting effects throughout school. Since the window of opportunity to intervene with behavior problems is narrow, early educators must understand the nature of the behavior problems and design an educative plan to teach the child alternative approaches.

The first step in analyzing the behavior problem is to determine the "Pay Off" for the child or the function of the behavior. Challenging behaviors usually fall into one of the following categories: 1) behavior that gets the child some attention, either positive or negative; 2) behavior that removes the child from something unpleasant, like work or a task; 3) behavior that results in the child getting something she or he wants, like candy or a toy; and 4) behavior that provides some type of sensory stimulation, such as spinning around until the child feels dizzy and euphoric.

To understand the function of the behavior, it is important to examine the ABC's of the behavior: the antecedents, behaviors, and consequences associated with the problem. The antecedent requires a record, which describes what was happening just prior to the incident. The actual behavior then can be described in observable, measurable terms: instead of saying that the misbehaving child had a tantrum, detail that he threw himself on the floor, screamed and pounded his fists on the floor for four minutes. Finally, examine the pay-off (consequences for the behavior.) When teachers examine the ABC's of the behavior, they are better able to understand the child's motivation, establish preventative strategies, and teach alternative social skills the child can use to meet his or her needs.

With almost 30% of all public schools in the United States offering After School Care (Author Unknown, 2003), After School Care (ASC) programs have also become an expanded

learning opportunity for students to learn appropriate behavior. ASC programs can build on what students have learned during the school day and provide enrichment activities based on student's strengths or interests. In particular, ASC programs offer a marvelous opportunity for all children, but especially those with special needs to become part of a caring group and develop their skills and talents to the fullest. Remember, because special needs children have much in common with their peers, they enjoy participating in the same activities that their peers enjoy. However, participation of special needs children usually requires minimal modifications in the activities that occur. These modifications should result in the individualization of the activity and should be taken into account when planning for all children. The modifications may require a change in the rules to make the activity more or less challenging. It may require a change in the time allowed for completion. Equipment may need to be modified. It may also require a special behavior plan to enforce the expectations of appropriate behavior. The use of a token economy is an intervention to prevent antisocial behavior and most importantly is a stimulus to teach children alternative behaviors (PageWise, Inc., 2001).

A token economy is a system of individual reinforcement of target behaviors in which tokens are administered and exchanged later for backup reinforcers. In other words, it is an intensive, in-class positive reinforcement program for building up and maintaining appropriate classroom performance and behavior. Token programs involve the distribution of physical tokens (for example, poker chips, stickers, stars, smiley faces, etc.) or points following appropriate behavior. The tokens or points can be accumulated throughout the day and exchanged for designated rewards at a specified time. A predetermined goal is set for the number of tokens or points required to earn a reward. The teacher is responsible for distributing the token and providing the reward. A punishment technique involving the loss of tokens following the occurrence of the inappropriate behavior is called response cost (Author Unknown, 2004).

A token program is one of the most powerful behavioral interventions for improving school behavior. Token economies are often quite effective for students who are resistant to other types of motivational or behavior management techniques. Other benefits of this system are ease of administration, the use of immediate reinforcement while teaching delayed gratification, lack of boredom or satiation for the student due to the availability of a variety of back-up reinforcers, and lack of competition between students as they compete only against themselves (McInteyer, Undated).

Reid (1999) focused on two facets of treatment for students with attention deficit hyperactivity disorder: educational accommodations and interventions for promoting appropriate behavior. Implementing a token economy was one of the interventions used for promoting appropriate behavior. The researcher suggested that six steps needed to be taken when implementing a token economy: (1) selecting a target behavior; (2) making and posting rules; (3) selecting tokens; (4) establishing back-up reinforcers; (5) establishing prices; and (6) field-testing the system by tallying the points the student would earn to help set initial process appropriately. The frequency with which tokens were awarded was an important area of discussion because students with ADHD have difficulty deferring gratification. Awarding tokens and allowing them to purchase reinforcers at frequent intervals were found to be more useful and effective. In addition, response cost could be easily combined with token economies through the use of fines for inappropriate behaviors.

Buisson and Murdock (1995) conducted a study on the effects of a token economy on response latency in two boys in a deaf education resource room. Neither would complete a written assignment within the prescribed time limit. Using the changing criterion design, the boys' teacher gave them tokens contingent upon their starting promptly so that they could complete the heading for their written assignments within their individually predetermined time limits. In addition, the teacher consistently praised each student when he delivered a token. He gradually reduced the amount of the token reinforcers, while continuing his praise, as students reached individually specified criteria according to the following schedule: Continuous Reinforcement (CRF), Fixed Ratio every 2nd response (FR2), Variable Ratio on the average of 3 (VR3) and Variable Ratio Schedule (VRS). The students could purchase edible treats or school supplies for 1 to 2 tokens, a certificate for free time using the typewriter for 3 tokens, or a certificate for a free homework pass for 5 tokens.

One of the difficulties encountered during this investigation was setting accurate criteria. The boys did not always meet the criteria determined by their teacher. Despite the difficulty, the data revealed that one student's latency decreased from a baseline mean of 47 minutes 40 seconds to a mean of 57 seconds during the final intervention. The other student's latency decreased from a baseline mean of 3 minutes 8 seconds to a mean of 41 seconds during the final intervention.

McGoey and DuPaul (2000) compared the effects of a token reinforcement and a response cost intervention in reducing the disruptive behavior of four Caucasian preschool children with attention-deficit/hyperactivity disorder. This intervention included the use of buttons as token reinforcers for good behavior in a half-day preschool setting. Alternatively, students could lose buttons for breaking the classroom rules. Observers recorded how many times the children followed and disobeyed classroom rules, were off-task, threw temper tantrums and were engaged in positive and negative social interactions. The disruptive behaviors decreased significantly when the token reinforcement and response cost contingency intervention were implemented.

Reinecke, Newman, and Meinberg (1999) determined the effectiveness of self-management as a procedure to teach sharing to preschoolers with autism using reversal design. Three preschool boys with autism, each familiar with the token economy, were given the opportunity to take a token each time he shared spontaneously or in response to the verbal prompt of the teacher in play situations. In other words, a 3-term contingency (ABC) was established. The Antecedent (A) was the play situations, the Behavior (B) was sharing, and the Consequence (C) was to take tokens after sharing. All students systematically demonstrated a higher frequency of sharing during self-management phases than during baseline conditions in which tokens were provided non-contingently. This demonstrated that the mere presentation of tokens by the experimenter was not sufficient to cause behavior change. Rather, the opportunity to take tokens contingent upon correct responding appears to have led to an increase in sharing for all three students.

Kehle, Bray, Theodore, Jenson, and Clark (2000) conducted a pilot study designed to investigate the effectiveness of a multi-component intervention to decrease disruptive behavior within a group dependent reinforcement procedure. The researchers described disruptive behavior as being non-compliant, inattentive, and disruptive in the classroom to the extent that learning was impeded. This multi-component intervention, delivered within a group contingency format

(independent, dependent, and interdependent) was comprised of antecedent strategies involving teacher movement, public posting of classroom rules, precision requests, and the consequences of response cost, token economy, and mystery motivators.

This intervention was employed in an elementary general education classroom. The teacher had a class of 23 students that included 3 male mainstreamed students diagnosed as seriously emotionally disturbed. Three mystery motivators (in envelopes with each of the students' names on one of them), were prominently displayed in the front of the class. The class was instructed that when one or more of the boys received their mystery motivator contingent upon their compliance with the posted classroom rules, they would receive a point. After accumulating a predetermined number of points, the 3 students received their respective mystery motivator. However, when this occurred, all of the students in the class also received the same award (a pencil, stickers, etc.). This dependent group reinforcement procedure produced dramatic results in the behavior of the 3 students with SED as evidenced by an approximate 50% deduction of disruptive intervals from baseline to follow-up. The primary limitation in this study was to determine how the various components interplayed to reduce disruptive classroom behaviors. Although preliminary studies have indicated positive results regarding the implementation of multi-component intervention strategies, this is a relatively new area of applied research.

Conclusions

Perhaps the reason that a token economy is so effective is that a token is a visible evidence of progress. It also reminds the student to display proper behavior, and assures that the teacher will notice appropriate behavior and interact with the student in a positive manner. The results of these investigations adds to a recognized body of literature that demonstrates the effectiveness of using a token economy to modify a students' behavior. A question that still needs to be investigated is, "Will the effects of a token economy with a response cost component on young children with developmental delays reduce inappropriate behavior in an After School Care Program?"

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Effects of the Good Behavior Game Plus Merit on the Disruptive Behavior of Children with Emotional Handicaps

by

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Introduction

Research on group-oriented contingencies for managing social and academic classroom behavior has received a great deal of attention. A group-oriented contingency is one in which the positive reinforcement for a group of students is based on the performance of a specific pre-determined behavior from an individual within the group, a subset of the group, or the group as a whole (Tankersley, 1995). Group-oriented contingencies have been proven to be as effective for behavioral change as individual contingencies (Solomon & Tyne, 1979), but are easier for teachers to manage within the classroom than individual contingencies (Gresham, 1983). Group-oriented contingencies also facilitate positive social interactions among group members (Gresham, 1983).

Group-oriented contingencies have been divided into three types: dependent, independent, and interdependent. The dependent group contingency system is where all members of a group receive reinforcement if just one individual of the group meets the set performance criteria. The independent group contingency system is where only the individuals within the group that meet the performance criteria will receive the reinforcement. Finally, the interdependent group contingency system is where all members of a group receive reinforcement only if the entire group meets the set performance criteria (Tankersley, 1995).

An example of an interdependent group contingency system is the "Good Behavior Game." The Good Behavior Game, developed by Barrish, Saunders, and Wolf (1969) involves dividing a classroom into two or more groups, stating criteria for behavior, observing all individuals within the group performing the desired behavior, and reinforcing those groups in which all individuals within the group performed the desired behavior (Barrish, Saunders, & Wolf, 1969). Many research studies have shown The Good Behavior Game to be effective in reducing the disruptive behavior of students.

Barrish, Saunders, & Wolf (1969) found that the use of a classroom behavior management technique, the Good Behavior Game reduced the disruptive classroom behaviors in a regular fourth-grade class. The class included 24 students, seven in which had been referred by the teacher several times for problems such as, "out-of-seat behavior, indiscriminate noise and talking, uncooperativeness, and general classroom disruption" (Barrish, Saunders, & Wolf, 1969, p.119).

The procedures for the Good Behavior Game that Barrish, Saunders, & Wolf (1969) outlined are as follows: "first, teachers should define target behaviors that they would like to see improved and determine when these behaviors are most problematic in their classrooms. Criteria for winning must be set and reinforcers established; the students should be taught the rules for playing. Next, the classroom is divided into teams and team names are written on the chalkboard. If any student breaks a rule when the game is in effect, the teacher makes a mark by the name of the team of which the disruptive student is a member. At the end of the time in which the game is played, any team that has fewer marks than the pre-established criterion wins. Members of the winning team(s) receive reinforcers daily. In addition, teams that meet weekly criterion receive reinforcers at the end of the week", as cited by Tankersley (1995, p. 20).

The disruptive classroom behavior that was measured in this study included both out-of-seat behavior and talking-out behavior. Out-of-seat behavior was defined as, "leaving the seat during a lesson or scooting the desk without permission. Exceptions to this definition included out-of-seat behavior that occurred when no more than four students signed out on the chalkboard to leave for the restroom, when students went one at a time to the teacher's desk during independent study, and when students were merely changing orientation in their seat. In addition, when a student left his seat to approach the teacher's desk, but then appeared to notice that someone else was already there or on his way and consequently quickly returned to his seat, the behavior was not counted. Permission was defined as, raising one's hand, being recognized by the teacher, and receiving consent from her to engage in a behavior" (Barrish, Saunders, & Wolf, 1969, p.120). Talking-out behavior was defined as, "talking or whispering without permission. It included, talking while raising one's hand, talking to classmates, talking to the teacher, calling the teacher's name, blurting out answers, or making vocal noises without permission" (Barrish, Saunders, & Wolf, 1969, p.120).

Although the results of this study indicate that the Good Behavior Game significantly and reliably reduced the out-of-seat and talking-out behaviors of the students, it did not show exactly which components of the game contributed to the effectiveness of the procedure. Medland and Stachnik (1972) replicated and extended these findings by using a variation of the game and by conducting a systematic analysis of the components of the game. The target behaviors they used included out-of-seat, talking-out, and disruptive responses. They also took it a step further and looked at the classroom rules, a light feedback system, and group consequences. They found that the game significantly reduced the out-of-seat, talking-out, and disruptive behaviors from their baseline rate. In addition, the individual components of rules and the light feedback system after their association within the game were effective in reducing behavior from its recorded baseline rate. The group consequences of extra recess and extra free time did not contribute to the reduction of the disruptive behavior (Medland & Stachnik, 1972).

In another study, Harris and Sherman (1973) studied whether the procedures of the Good Behavior Game would be effective in reducing disruptive behavior in different classrooms, analyzed the components of the game to see which components were responsible for the control over the disruptive behavior, and the effect the Good Behavior Game had upon the academic performance of the children. The replication of the procedures of the Good Behavior Game, defined by Barrish, Saunders, & Wolf (1969) in two classrooms showed it to be an effective technique for reducing disruptive talking and out of seat behavior. The analysis of the components of the game showed the division of the class into teams, group consequences for a winning team, and the criteria set for winning the game were effective in reducing the disruptive behavior. Harris and Sherman (1973) suggest several factors why Medland and Stachnik (1972) may have found the ability of the game without consequences to reduce disruptive behavior. "First, the teacher's announcement of the winning team could have served as a mild reinforcer for one team scoring fewer marks than the other team. Second, in this condition it was observed that students on the winning team occasionally harassed students on the losing team with statements such as: 'My team eat yours again today', 'Can't your team do anything right?', 'We still win even if we don't get to go home early', etc. The opportunity to comment to members of the losing team may have reinforced certain students to maintain a low rate of disruptive behavior even when winning did not result in permission to leave school early" (Harris & Sherman, 1973, p.414).

The final results of their study indicate that the reduction of disruptive behavior produced only slight improvements in the accuracy of academic performance in one of the classes. This improved accuracy was a result of a lower rate of incorrectly answered problems, rather than a higher rate of correctly answered problems (Harris & Sherman, 1973). The only positive results that have been found on the Good Behavior Game and academic achievement have been related to task completion and accuracy in the classroom (Darveaux, 1984; Harris & Sherman, 1973).

Darveaux (1984) believed that the Good Behavior Game had three negative characteristics. First, the game has teachers monitor only inappropriate behaviors. This could increase the inappropriate behaviors for those students who are reinforced by negative attention. Second, the game focuses on negative behaviors, which could decrease desirable behaviors such as participating in class discussions. Finally, the game focuses on what the student should not do instead of what the student should do. In response to these concerns, Darveaux included merits in his implementation of the Good Behavior Game. Merits focused on the students' positive behavior. They were earned when students completed assignments with 75% accuracy and when they participated in classroom activities. For every five merits a team earned, they could have one mark that was previously acquired for disruptive behavior removed from their team. This allowed the students to compensate for their disruptive behavior through academic engagement. This modified intervention, the Good Behavior Game Plus Merit proved successful in reducing disruptive behavior and improving assignment completion in two students designated as high-risk for placement in a behaviorally impaired classroom (Darveaux, 1984).

The Good Behavior Game Plus Merit appeared to be highly acceptable to both the students and the teachers. The teacher who used the game in this study commented that she was "impressed with the intervention's overall effectiveness, minimal amount of time expenditure, low cost, and positive effects on other students in the classroom. In addition, the merit system helped her develop skills of being more positive towards the students" (Darveaux, 1984, p.514). The Good Behavior Game Plus Merit is socially significant in that it conserves school resources by allowing students with minor difficulties to remain in the regular classroom, as well as improves the behavior management skills of the teacher utilizing it (Darveaux, 1984).

All of the research that has been conducted on the effectiveness of the Good Behavior Game on disruptive behavior has focused on children within the regular education classroom. The purpose of this study will be to examine the effectiveness of the Good Behavior Game Plus Merit in controlling the disruptive behaviors (out-of-seat behavior and talking-out behavior) of children with emotional handicaps (EH) in a self-contained classroom. It is hypothesized that the disruptive behavior of students with EH in a self-contained classroom will be reduced when engaged in the Good Behavior Game Plus Merit.

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Effect of Peer Mediated Intervention on Academic Achievement and Social Performance

By

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Training students to work cooperatively has been highly encouraged in classrooms today. Studies have shown that students respond better academically and socially when they interact with their peers. In an effort to improve the quality of education, numerous single subject studies have been conducted suggesting that diversity among students contributes to stronger academic and social performance (Dugan, Kamps & Leonard, 1995; Gillies & Ashman, 1998; Gillies & Ashman, 2000; Green, Alper, Schloss & Kohler , 2003; & Nevin, Johnson & Johnson, 1982). This study will review some of the designs that have been applied in the areas of cooperative learning and peer mediated interventions and will address their impact on academic achievement and social skills.

Robertson, Green, Alper, Schloss & Kohler (2003) conducted a study at a day care center to determine whether early intervention for children with developmental delays will improve their skills "on-task behavior, interactive play with other children and appropriate participation in circle/story time." The participants in this study were a 3 year 7 month-old African American boy and a 4 year 9 month-old Caucasian girl. The study also included two trainers who were at appropriate developmental stage (5 years old African American boy and a 3.5 year old Caucasian boy). The goal of this study was to create an environment of interaction between children with disabilities and their peers using minimal adult intervention. To monitor the effect of the independent variable "(peer mediated songs and finger plays, attention to photograph of appropriate behaviors and verbal cues)" over the dependent variable, researchers used a multiple baseline design. Initially, they recorded baseline for both groups of children. After base line was established, "peer-mediated intervention" was introduced for the first dependent variable (engagement on task behavior) while the other two variables continued being recorded for baseline and they were later introduced one by one. To record the data they employed checklist and time sample interval recording. After each intervention was introduced the improvement on every behavior was exponential. Engagement on task went from 50% during base line to a 100% during intervention. In the case of interactive play with peers, a previous 50% average escalated to 95% for one of the children and 100% for the other child. Regarding participation in circle/story time, both children scored 100% for which they had previously scored a 66% average. In addition to these observations, researchers added a maintenance face, in which baseline conditions were returned as previously. For their satisfaction, both groups of children maintained same levels of behaviors without the need for adult intervention. To further enhance the validity of this study interobserver data was collected and it showed a 91% to 100% agreement across the targeted behaviors observed. Peer intervention with minimal adult assistance provided and environment of acceptance and interaction among peers.

Dugan, Kamps, Leonard, Watkins, Rheinberger & Stackhaus, (1995) investigated the effects of cooperative learning groups on inclusive settings. They focused this study on 2 students with autism who were placed in a regular social study class of 16 fourth graders. Their purpose was to determine if cooperative learning would increase academic performance and social skills for students with autism and their peers. To study these behaviors they used a reversal design (ABAB), which would allow them to conclude if cooperative interventions would account for

improvements in areas of academic and social skills. First, they implemented a 40 min lecture for two weeks (base line). Then, the intervention would be introduced for three weeks and the class would hold cooperative learning sessions with minimal teacher's participation. Each session would be structured in a way that each student would have a role according to his/her skills. Then, individuals would be evaluated and teams would receive general scores. During this phase, communication and cooperation among students was crucial for their success. In addition, groups would rotate every week to give students the opportunity to interact with each other in the classroom. In order to monitor academic improvement, researchers used pre-test and post-test quizzes. Academic engagement was recorded through the use 10-s momentary time sampling during 10 min every day. Also, social interaction was collected through behavioral observations. To strength the experiment interobserver agreement was collected, which showed positive consensus among the different items observed. In conclusion, the results of this experiment have indicated both groups of children (autistics and peers) benefited from this model of cooperative learning. The article promotes cooperative learning and group interaction to improve children's academic skills. As well, it highlights the importance of preparing students to become more sensitive to individual differences creating a rich learning environment.

A similar study by Gillies & Ashman (1998) focused on cooperative learning for structured and unstructured groups. For their work, they selected a group of 212 children from 1st grade and one hundred eighty four children from 3rd grade. They intended to learn if children within cooperative groups would improve academic performance. To investigate this, researchers randomly assigned students to both groups (structure and unstructured). Then, they would train the structured group on problem solving strategies as well as social skills. For the unstructured group, cooperation among students was encouraged but they did not receive any training. To analyze the effect of the intervention, they recorded data using a check list divided into several categories (e.g. cooperative behavior, individual behavior, etc). Besides, they measured the dependent variable using "momentary time sample." With this method they were able to record the target behavior for each category at 10-s intervals for 10 min. period. "Only the behavior that was observed at each 10-s interval for the child who was being observed was recorded." In addition the article reports a 100% interrater agreement, which adds reliability to this study. To analyze results, researchers used a statistic method called MANOVA. The interpretation of these results were statistically strong, which let the authors conclude that children would express more interest for learning when they were being challenged by peer interaction in structured groups. Gillies & Ashman, (1998) also found out that, once children learned cooperative skills, they assumed a more conscious role in trying to support each other. In sum, cooperative learning is not only recommended for academic improvement, but it is encouraged to improving communication and social skills among children.

To provide additional support to their previous research (Gillies & Ashman, 1998), Gillies & Ashman, (2000), these researchers decided to conduct a systematic replication. At this time, they included students with learning disabilities to their structured/unstructured model. They decided to investigate if cooperative learning would have the same influence in academic achievement and social interaction for general students as students with learning disabilities. The participants in this study were 152 third graders, 22 of them were identified with disabilities. For this study, children would work in teams of 4 students. Each group would have one high ability student, two medium ability and a student with disability. They implemented the same procedure to form structure and unstructured groups, but at this time structured groups were trained using "Bloom's taxonomy". This method of teaching leads to higher level of thinking under a natural discovery process. For the

data collection process, researchers used the same method as mentioned on their previous study (e.g. Gillies & Ashman, 1998). Then, they analyzed the results using statistic design (ANOVA) across all categories and groups. According to the authors, the results from this measure were not statistically solid to conclude that structured learning would improve the learning outcome of children with disabilities. However, the study advocates for mainstreaming children with learning disabilities. As the study reports, when children with disabilities were in the structured groups they engaged in task activities for longer periods of time and displayed better social interactions with peers. Although conclusions were limited in this study, researchers recommend the use of structured small cooperative learning groups for inclusion settings. This method affects positively the interaction, cooperation and engagement among various types of students.

Another study conducted by Nevin, Johnson & Johnson (1982) analyzes whether the use of group or individual contingency would influence learning outcomes of children with disabilities. In addition, the article explores issues of acceptance and levels of self-esteem among students under different contingency strategies. The sample used in this research was composed of "four first-graders, 11 seventh-graders and five first-graders" (p.41) who were identified as low achievers. This research was divided in four different studies to gain a better understanding of the target behaviors.

For the first study, Nevin, et. al., (1982) worked with four first graders who needed to learn the alphabet. In this case, they chose ABA design in order to analyze the effect of the intervention on the dependent variable (flashcard performance). They proceeded to work with the students individually first. Students would receive praise based on their individual work (baseline phase). After two weeks, group contingency was introduced-- two students would work under group contingency and the other two would continue working individually. During this phase, the students under group contingency would be praised on the basis of their work as a group. Then, during the following two weeks, the four students were switched to "heterogeneous group contingency." The data was graphed and showed a dramatic increase of the targeted behavior for children with a disability working in heterogeneous groups. In addition, the data suggested that once improvement was established, the behavior (performance on the flashcard) continued ascending steadily. In fact, the graph indicated that all four children strengthened the academic behavior under heterogeneous group contingency. In conclusion, this study reveals the importance of getting children with disabilities exposed to regular peers because it can enhance their academic response.

For their second study, Nevin, et al., (1982) selected "eleven seventh-grade students" who were low achievers in math and also had conduct problems. The method of analysis they decided for this study was A-B-A reversal design where students worked first independently and then worked under group contingency. The dependent variables to be observed were the level of achievement in math, study habits and social acceptance. As in previous study, the data showed a remarkable improvement for all three targeted behaviors when individuals were placed on group-contingency. The study describes how a multiple baseline design was used to measure "achievement." First, researchers recorded math performance during baseline. Following baseline, group contingency was introduced on steps. For example, one day the group would gain points for performance in multiplication but not in division. Then, the next day the contingency would be switched to division. After different interventions were implemented, researchers concluded that group contingency contributed to math achievement for targeted students. The second behavior observed was "on-task study behavior." In this case, a decrease on frequency during baseline and

withdrawal phases clearly indicated that group contingency influenced students to stay on task. In addition, to better understand the outcome of their observations “study habits” and “multiplication and division achievement” were graphed. Graphing indicates that students would improve only when the group contingency was present. Lastly, social acceptance variable was assessed as well. According to students’ reports, their levels of acceptance and interaction with peers increased remarkably after the group contingency was introduced. Thus, It can be summarized that improving levels of social interaction among students can increase their academic achievement and social acceptance.

In addition, Nevin, et al., (1982) discussed a third study dealing with inclusion of five ninth-graders students with learning disabilities in a regular class. In addition to low achievement in math, these students had poor social skills as well. For this study, they used an A-B-A-B design to evaluate the effect of the independent variable (individual vs. group contingency) over the targeted behavior. Individual contingency was designed as a method of rewarding students on the basis of their individual work (baseline). On the other hand, group contingency was designed to reward group performance. During both contingencies, students gained tokens. For example, during group contingency the group gained tokens which they could loose if they did not meet criteria for number of correct math problems completed. As reported by teachers, “no student failed to meet the minimum rate” during this phase. In addition, cooperation among group members during math sessions was established and reinforced. For example, the group would gain tokens based on the number of correct math problems they completed. In addition, a response cost would be administered if they failed to complete the number of correct math problems. While engaging in helping each other, the group was modeling cooperation and at the same time they were learning from every one. The last variable to be observed was social interaction with peers. To record the data, “pre-and post intervention peer attitude questionnaire” were given at the end of each contingency. Students’ self report regarding acceptance and interaction were highly encouraging during group contingency. In order to assess the reliability of this model, interrater agreement was measured and the study reports a 100% agreement between researchers and independent observers in both math achievement and social interaction. Consequently, the outcome of this experiment indicates that group contingency is a powerful asset to improve math achievement and interpersonal relationship among diverse students.

In a fourth study conducted with “twenty-two first-grader children (15 girls and seven boys)”, Nevin, et al., (1982) analyzed the outcomes on self-esteem and acceptance among all students. In order to monitor target behavior, individual and group contingency was implemented as the independent variable. The method of analysis used in this case was AB design and observation for both contingencies was graphed. For the first two months of the experiment, students worked alone and they would receive praise based on their individual work. Then, for the following seven months students worked in groups. At this point, they were encouraged to work with each other to ensure understanding among all members. The groups were rotated periodically to create more interaction among all the students in the classroom. In addition, the students would received acknowledgements from the teacher based on the accuracy of their work and the cooperation with each other. The result of this intervention was phenomenal. The students’ grades went up, but also their self-esteem and interaction with peers improved. These results were illustrated on the “self report inventory” conducted by their teacher. The study also reports that, student interest for learning grew exponentially under group contingency. “The use of group-

contingencies created a more dispersed network of peer relations in which fewer students were rejected or superstars (56)." This represents a great implication for today's classrooms where often we have witnessed the negative consequences of isolation. It is very important to create and equilibrium among all students to facilitate the learning process, but fundamentally to model healthy social relationships for students. Results from the four studies supported their belief about the academic and social benefits of using group contingencies. This instructional tool helps educators to accomplish their goals of making education more effective and learning more efficient and beneficial for students.

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The Effects of Token Reinforcement and Response Cost on the Disruptive Behaviors of a Preschooler at Risk for ADHD

by

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Introduction

Attention Deficit and Hyperactivity Disorder (ADHD) is one of the most common psychiatric disorders among children (Slomkowski, Klein, & Mannuzza, 1995). ADHD is estimated to occur in 2 to 3% of the preschool population (McGoey & DuPaul, 2000). Individuals with this disorder exhibit significant problems with attention span, impulse control, and activity level relative to similar-aged peers (as cited in DuPaul, Barkley, & McMurray, 1991). The overall treatment plan for ADHD usually includes more than one type of help. Despite a range of alternative interventions, the most frequently used treatment modality for children with ADHD is stimulant medications, such as methylphenidate (Zarin, Suarez, Pincus, Kupersanin, & Zito, 1998). Psychostimulant medications are so named because of their ability to increase the arousal or alertness of the central nervous system of individuals with ADHD (DuPaul et al., 1991).

Research studies have consistently demonstrated the short-term enhancement of the behavioral, academic, and social functioning of children being treated with stimulants (DuPaul et al., 1991). Many studies have recognized the efficacy of stimulants in reducing the core symptoms of ADHD. Stimulant medications have been found to have positive effects on the ability of children with ADHD to sustain attention (Rapport et al., 1988), and to inhibit impulsive responding (Rapport et al., 1987).

Jensen, Arnold, and Richters (1999) have demonstrated the efficacy of stimulants and behavioral techniques in improving behavior among children with ADHD. In that study, 579 children of ages 7 to 10 were randomly assigned to one of 4 different treatment groups: medication management alone, medication and behavior management, behavior management alone, and a standard community care group. School-aged children diagnosed with ADHD showed a reduction on inattention, impulsivity, and hyperactivity over a 14-month period when they were treated with medication alone or with a combination of medication and behavior management. This study demonstrated the efficacy of behavior modification techniques in decreasing disruptive behaviors of children who have been diagnosed with ADHD.

Contingency management procedures have been successfully applied in school settings to treat children with Attention Deficit and Hyperactivity Disorder. In a meta-analysis of classroom interventions for students with ADHD, DuPaul and Eckert (1997) found that consequent-based strategies consistently produced clinically significant improvements in classroom behavior. This study also found that contingency management and academic interventions were more effective than cognitive-behavioral procedures in enhancing behavior control in this population.

Purpose of the Literature Review

The purpose of this review is to examine the effects of token reinforcement and response cost interventions on the attentive behavior of a preschool child exhibiting ADHD symptoms. The

study will investigate whether the implementation of a token reinforcement procedure combined with a response cost system will improve the attentive behavior of a preschool student at risk for ADHD.

One effective classroom-based contingency management procedure for children has been response cost. Rapport, Murphy, and Bailey (1982) conducted a single subject, within subject comparison to evaluate the impact of response cost on the attentional behavior and academic productivity of two boys, 7 and 8 years of age diagnosed with ADHD. These researchers found that on-task behavior and academic performance were significantly enhanced across subject areas (phonics and math) compared to baseline levels. Although both the response cost and psychostimulant medication interventions were effective in increasing on task behavior and academic performance, response cost resulted in better behavioral control and class work productivity compared to individually titrated dosages of psychostimulant. These results should be generalized cautiously because only two children were studied.

Carlson, Pelham, Milich, and Dixon (1992) evaluated the effects of two commonly used treatment approaches employed for ADHD. These researchers compared two doses of Methylphenidate (MPH) in combination with two classroom conditions in twenty-four 6 to 12 year old boys of average intelligence, diagnosed with ADHD. In the behavior modification classroom condition, a token economy system, time-out, and daily home school notes were employed in contrast to the regular classroom condition where these procedures were absent. Results of this study supported the effectiveness of both MPH and behavior intervention in improving children's classroom behavior. Children displayed significantly higher rates of on-task behavior and lower rates of disruptive behavior under behavior modification than under the regular classroom condition. One of the limitations includes the fact that the study was implemented "within the context of an established and comprehensive behavior therapy treatment program in which behavior modification and regular classroom conditions had been altered in the previous 5 weeks of the program" (Carlson, Pelham, Milich, & Dixon, 1992, p. 228). Prior exposure to behavior therapy might have resulted in some carryover effects during regular classroom weeks. Therefore, the results should be interpreted cautiously when applying them to settings in which behavioral treatments have not been previously conducted.

McGoey and DuPaul (2000) compared the effects of a token reinforcement and response cost interventions in reducing the disruptive behavior of four preschool children diagnosed with ADHD. This study was conducted in the children's classrooms in a preschool program. Each classroom had 20 students whose ages ranged from 4 to 5 years. During the study, trained graduate students conducted direct observations of behavior. Behavior categories and definitions were adapted from the social behavior observation system of the Early Screening Project and corresponded to the established rules in the classroom. Observations occurred at least three times per week and were randomly conducted during the preschool half-day program. Each observation lasted 20 minutes. A combination of 15-second partial interval recording for inappropriate social behaviors and 15-second momentary time sampling for activity changes was used to collect data. The teachers collected rating scales of participants. Interobserver agreement ranged from 86.3% to 100%, with an overall mean of 99.4%.

A single subject ABAC reversal design was used to compare baseline (A), a token reinforcement intervention (B), and a response cost intervention (C). During baseline, observational

data were collected during the regular routine in the classroom. During the token reinforcement intervention, participants earned buttons displayed on a chart for following the established rules in the classroom. The total numbers of buttons available to earn were five. Three small buttons were required for the "big button." At the end of the preschool class, the child earned rewards for earning a predetermined number of big buttons. The response cost intervention procedure used the same button chart as the token reinforcement procedure. However, children lost buttons for breaking rules. The data gathered in this study revealed that both the token reinforcement and response cost interventions were associated with reductions in the disruptive behavior of the three participants in the classroom. Some of the factors that limit the results include the fact that teachers could have created bias in the teacher rating of behavior because they were not blind to the phases or hypothesis of the study. In addition, the outcome of the interventions could have been affected because a functional analysis of behavior was not conducted (McGoey & DuPaul, 2000).

A study conducted by DuPaul, Guevremont, and Barkley (1992) examined the efficacy of response-cost contingencies, using the Attention Training System (ATS), alone and in combination with directed-rehearsal procedures for managing classroom behavior and academic productivity. The ATS is an electronic apparatus based on response-cost that systematically delivers both positive and negative feedback to children. Participants were two boys, 6 and 7 years old, diagnosed with ADHD. A within-subject reversal design with multiple baseline components was employed to evaluate each child's behavior and academic performance. Results revealed that response-cost contingencies improved students' task related attention and reduced other ADHD symptoms. In addition, response-cost procedures have the potential to exert behavioral control during teacher lectures. There are some limitations in this study. First, the definition of inattentive behavior used could be considered overly inclusive and may have obscure important treatment-related changes in attention. Moreover, the academic work assigned to the two students was not always graded in terms of percentage accuracy. Therefore, the treatment effects on these variables were not easily discernible.

Several studies have examined the utility of functional assessment procedures in designing interventions for children with ADHD. Boyajian, DuPaul, Handler, Eckert, and McGoey (2001) assessed the efficacy of using brief functional analysis procedures for students at risk for ADHD. The participants in this study were 3 boys from middle class backgrounds, who ranged in age from 4 years, 11 months to 5 years, 1 month. Direct observation data were collected for 10 minutes during free play activities. There were three phases to the study: a) problem identification interview, b) brief functional analysis, and c) intervention implementation and evaluation.

During the problem identification interview, participating preschool teachers received consultative services. This phase consisted of an interview with each teacher designed to specify the problem behavior and to examine the antecedent, consequent, and sequential variables maintaining behavior. Functional analysis conditions were conducted using a single case sequential design with contingency reversals. During the intervention implementation, consultants implemented interventions based on results of contingency reversal. Each child's teacher implemented the intervention after observing the consultant. The individual interventions, developed based on the hypothesis generated from the brief functional analysis data, were effective in reducing the occurrences of aggressive behavior to zero or near zero levels. This study has demonstrated that behavioral interventions addressing the specific functions of a child's aggressive behavior can reduce this behavior without the addition of medication. One of the

limitations of this study is that a variety of extraneous variables may have served as confounds due to the fact that the functional analysis procedures were conducted in the typical preschool routine.

Conclusions

Although the literature review indicates that interventions can reduce disruptive behaviors, there are many unanswered questions. For example, will a preschool student with ADHD symptoms show less disruptive behavior after the implementation of token reinforcement and response cost intervention in the classroom and would the intervention result in maintaining behavior change when the intervention is removed?

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Treatments for Relational Bullying Behaviors of Preadolescent Girls

by

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The issue of bullying among school children is not a newly budding area of research; in fact, it has been the focus international attention since the 1980s. The first large-scale study was conducted by Olweus in 1983 in the Bergen region of Norway and produced quite favorable results in terms of reducing the self-reported incidence of bullying. Since then, a multitude of other countries have attempted to reproduce these results in their own schools by implementing similar anti-bullying programs. In this paper, a number of different articles were reviewed, including two primary sources by Eslea (1998) and Orpinas (2003). The subsequent articles were all secondary sources.

When considering the prevalence rates of bullying and the lasting effects it can have on children, it is easy to see why the subject calls for so much attention. For instance, one national study on bullying in the United States revealed 13% of sixth graders and 40% of third graders reported being the victim of bullying, while 10% and 14% respectively, reported being the perpetrator (Orpinas, Horne, & Staniszewski, 2003). Likewise, the psychological and emotional effects are quite severe. Children who suffer violence and aggression at the hands of their peers often exhibit depressive symptoms, psychosomatic illnesses, low self-esteem, increased anxiety and rates of truancy, and "are far more likely than non-bullied children to bring weapons to school to protect themselves" (Carney & Merrell, 2001, 368). Furthermore, children who have been identified as bullies by age eight are at an increased risk of having a serious criminal record by the age of thirty (Colvin et al., 1998).

To complicate matters, there are a variety of known ways in which bullies unleash their aggressive assaults. The most obvious are the direct methods, otherwise known as overt aggression. These behaviors include face-to-face physical attacks such as pushing, shoving, and kicking; they also include verbal threats like name-calling and teasing (Espelage & Swearer, 2003). Oftentimes, these are the methods employed by boys. It appears that girls more commonly use indirect (covert) or relational aggression methods. Indirect bullying involves "a third party in which verbal aggression is accomplished through rumor-spreading and name-calling" (Espelage & Swearer, 2003, 368). Relational aggression focuses on the damaging of the victim's friendships or inclusion in peer groups by the use of social exclusion, the spreading of rumors, and the manipulation of friendship relations (Espelage & Swearer, 2003).

Luckily, a review of the existing school-based interventions from various countries, including the United States, Norway, England, Switzerland, Canada, Finland, Spain, Belgium, and Australia, has yielded some hope in countering this worldwide phenomenon. For example, the Bergen Study revealed up to a 50% reduction in self-reported bullying. For the most part, however, studies showed only a modest decrease. In the following pages, several of the major studies were reviewed while a close eye on was kept where the interventions came up short.

The Bergen Study (1983), which was part of a nationwide campaign against bullying, used a sample of approximately 2,500 students from both the primary and secondary levels. As reported by Rigby (2002, 48), Olweus "employed an age-cohort design whereby time-lagged comparisons between age-equivalent groups could be made." The Olweus Bully/ Victim

Questionnaire was used before the intervention, as well as eight and twenty months after in order to assess its effectiveness. This anonymous questionnaire was meant to identify how many children considered themselves either a bully or the victim of bully, the frequency and location of these bullying episodes, and the forms of bullying behavior being used. In addition, teachers were also asked to provide ratings of the level of bullying problems in class. Because of the success of this study, Olweus developed the Bergen Anti-Bullying Program. Olweus argued that “a great deal of bullying behavior occurs because of the intention on the part of the bully to gain some kind of social reward; as a result...an anti-bullying program should aim to restructure the school environment in such a way so as to remove the positive and increase the negative consequences of bullying behavior” (Smith & Ananiadou, 2003, 194 -195). That change in climate, according to Olweus, is the product of having clear and firm rules set in place and the combined effort of both adults and children in combating such problems. Those underlying principles take place at the school, classroom, and individual levels. For example, frequent meetings were held between teachers themselves and with parents to discuss different issues and concerns, improved supervision on the playground and in the lunchroom became an integral part of the program, the kids wrote their own rules of conduct to announce what was acceptable and what was not, and role playing was used to discover different ways of reacting in any given situation. At follow-up after eight months, Olweus reported an approximate 50% reduction in bullying across age and sex groups.

The Rogaland Study, which was conducted in Norway in 1983 by Roland, made use of thirty-seven primary and secondary schools with a grand total of about 7,000 students. It was performed in much the same way as the Bergen Study; however, Roland did not lend as much direct support to the schools as did Olweus. Disappointing results emerged. As cited by Smith & Ananiadou (2003, 195) “not only were levels of reported bullying not reduced among the students, for boys they increased slightly in the course of the three years” after the intervention had first been implemented. Roland claimed that it was the three year delay between obtaining baseline and follow-up information that accounted for the difference; Olweus suggested it was due to “planning, data quality, times of measurement, and contact with the schools” (Smith & Ananiadou, 2003, 196).

Another major study was conducted in Sheffield, England and was funded by their Department for Education (DFE). As a result, it was known as the DFE Sheffield Anti-Bullying Project. It was a whole-school approach and was headed by Smith in 1991. The interventions in this study were based on pre-existing notions already in place in the United Kingdom and targeted the risk factors for bullying occurrences including “the school climate, the physical environment, the peer group, [and] the behavior of individual bullies and victims” (Smith & Ananiadou, 2003, 197). The twenty-three schools involved were asked to write their own document describing what bullying was, everyone’s responsibilities, and the consequences of such actions. In addition, drama, quality circles, and video were used, assertiveness training and the Pikas Method¹ for changing behavior were implemented, trained supervisors were posted in the lunchroom and playground, and peer support was made available. Also, “as part of the development process, schools were encouraged to conduct awareness-raising exercises and to consult widely with

¹ A method in which a counselor first asks for the bully’s perspective of the situation and then the victim’s in order to avoid making it look like the victim is telling stories. The counselor then asks the bully what can be done to improve things for the victim. Meetings are held to monitor their progress and to acknowledge that the situation is being resolved.

pupils, parents, and staffing order to build consensus and encourage cooperation" (Eslea & Smith, 1998, 205). These interventions, which were individually designed by the schools to meet their own needs, seemed to be critical to the success of this program. For example, some of the participating schools implemented the positive reward system to reinforce desired behaviors. Again, the Olweus Bully/ Victim Questionnaire was used to obtain measures in a age-cohort design similar to that in the Bergen Study. Also, interviews were conducted with the head teachers to keep abreast of their situations and concerns. The Sheffield Program had mostly positive results with the overall reporting of bullying going down. However, there were increases in bullying among girls. "All four heads said that girls' bullying was less visible and therefore harder to tackle" (Eslea & Smith, 1998, 216). "This may be due to the more covert nature of much of the bullying perpetrated and experienced by girls" (Rigby, 2002, 52).

The Toronto Anti-Bullying Intervention Program was conducted by Pepler in 1993 and had a sample size of just fewer than 1,000 primary school children. It was a systematic replication of the Bergen Study and interventions were implemented at the school, classroom, and individual levels. Pepler stressed, however, "that the Toronto project was a lot more modest in scope compared to the Bergen one, since it was not embedded in a nation-wide campaign, but relied almost exclusively on teachers and other school staff for development and implementation" (Smith & Ananiadou, 2003, 199). A code of behavior was created in each school; there was increased supervision on the playgrounds and in the halls; class rules were established; peer conflict-mediation was introduced; and drama projects with bullying themes were used to encourage discussions of the problem. What made this program different was that "it was preferable to promote positive rights of individuals rather than to impose negative rules as applying to bullying behaviors" (Rigby, 2002, 40). The Olweus Bully/ Victim Questionnaire was used, as well as a classroom activities questionnaire and face-to-face interviews in order to collect data. Overall, there was a slight reduction in reported cases of being bullied, even though there was an increase in children bullying others.

The Finland Study, conducted by Salmivalli in 2000, reported a significant reduction in children being bullied. Forty-eight primary school teachers "were [trained] so as to apply anti-bullying methods at three levels: the school level where anti-bullying policy was to be developed, the class level where curriculum work on bullying was undertaken with students, and the individual level where teachers worked with students involved in bullying" (Rigby, 2002, 42-43). A pre-test, post-test control group design was employed and the children were retested after six months using a self-report questionnaire and a peer-nominated questionnaire.

In addition, Salmivalli has begun "systematic research on what [has] been called participant roles in the bullying process" (Salmivalli, 1999, 453). Basically, it goes on the notion that there is more than just the role of bully and victim. There are all different levels of bystanders (assistant, reinforcer, outsider, defender, and no clear role). These roles determine what kind of action these bystanders will take. In fact, she says, "since peers are involved in bullying in different ways, and seem to be powerful moderators of behaviour in a school class, this 'peer group power' should also be utilized in putting an end to bullying" (Salmivalli, 1999, 453).

In Switzerland, the Bernese Study "rigorously assessed an intervention designed to reduce bullying in kindergartens" (Rigby, 2002, 33). It required intensive focused supervision of the teachers for four months, during which eight meetings were held. At these meetings, certain areas were stressed including the need for accurate observations of the children, the need for

cooperation between teachers and parents, the importance of setting limits, to stress consistency in behavior management, and to facilitate discussion among teachers. Data was collected using teacher ratings and peer nominations using a pre-test, post-test design. Interestingly, even though there was an overall decrease in physical and some forms of indirect abuse, there was an increase in verbal attacks.

Unfortunately, there is some skepticism as to whether the findings from international research can be successfully applied to the unique culture of American schools (Espelage & Swearer, 2003). As a result, the number of research studies in the United States concerning bullying has bloomed across the country in recent years. For example, Texas chose to employ the Expect Respect model, which is made up of five components. Sanchez, Robertson, Lewis, Rosenbluth, Bohran, and Casey studied the effects of this program on the participating subjects. The five components that comprised this program included staff training, classroom education, policy and procedure development, parent education, and support services. All 1,100 participants filled out self-report questionnaires and attended focus groups, which were held separately for boys and girls. Although the intervention groups said they were more likely to intervene on their own volition, the teachers actually reported an increase in the amount of bullying they witnessed (Rigby, 2002, 46). This increase, however, might have been due to a heightened awareness in general.

Similarly, researchers in South Carolina attempted to study the effects of an anti-bullying program in thirty-nine of their schools. Melton, Limber, Cunningham, Osgood, Chambers, Flerx, Henggeler, and Nation followed approximately 6,250 fourth through sixth graders over a two-year intervention period. "The overall nature and goals of the project were generally similar to the original Norwegian program, including core intervention measures at all three levels: school, classroom, and individual. However, the program was adapted to meet the particular needs of the target population" (Smith & Ananiadou, 2003, 202). For instance, there were additional support materials given to the teachers and staff, such as guidebooks, and members of the community were invited to engage in anti-bullying activities with the children. In the end, there was no significant impact on the number of reports indicating a reduction in students being bullied. There was, however, "a significant reduction in students' reports of bullying other children (by approximately 25%) in the intervention schools, with a corresponding increase in the control schools" (Smith & Ananiadou, 2003, 202).

Of particular interest was a study conducted by Orpinas, Horne, and Staniszewski, which concentrated on changing the school environment in order to reduce aggression and victimization (2003). The study took place in a large public elementary school in the Southeastern corner of the United States. A needs assessment was conducted via a survey in order to determine the strengths and weaknesses of the school. Aggression and Victimization Scales were administered to the subjects to verify baseline and post treatment prevalence, as well. "A decision was made to place particular emphasis on an effort to reduce name-calling and teasing...because of its high prevalence and because it frequently precedes physical violence" (Orpinas, Horne, & Staniszewski, 2003, 436). Interventions were implemented in three key areas: the modification of school norms and policies to create a positive school environment (BEE Character Education Program), the education of students (conflict resolution, anger management, respect for self and others, and effective communication skills), and the training of teachers (20-hour training on aggression prevention including conflict resolution strategies, character education, and behavior management) (Orpinas, Horne, & Staniszewski, 2003). The results of this program showed a stronger impact on

the younger children. As far as the intervention effects of self-reported aggression in children from kindergarten through second grade, there was a 40% decrease with the strongest reductions being shown in verbal aggression. In third to fifth graders, there was only a marginally significant reduction. As far as intervention effects on self-reported victimization, there was a significant decrease across the board from kindergarten through fifth grade (19% K-2 and 23% 3-5), with an emphasis on verbal aggression in third to fifth graders.

Another program worth evaluating is the Anger Coping Program, which was designed to “help aggressive boys better understand and identify their anger, increase their problem-solving abilities, and improve their social interaction skills” (Leff, Power, Manz, Costigan, & Nabors, 2001, 350). Even though this program focuses only on boys primarily from the ages of eight to fourteen, it is crucial that a successful program in anger management is analyzed since “anger was found to be the strongest predictor of bullying [as well as] a significant predictor of an increase in this behavior over a 6-month period” (Espelage & Swearer, 2003, 373). The Anger Coping Program comes with a video that covers topics including goal-setting, perspective-taking, social problem solving, and awareness of physiological arousal. It also allows the children to generate their own alternatives to conflict situations (Leff, Power, Manz, Costigan, & Nabors, 2001). After several research studies that utilized a pretest-posttest control group design with random assortment were conducted, decreases in aggressive and disruptive behavior were found among the participants. Even at a three-year follow up, there were lower rates of substance abuse, more competent social problem solving skills, and higher rates of self-confidence than the control group, although there was no significant difference in delinquent behavior between the two (Leff, Power, Manz, Costigan, & Nabors, 2001).

Conclusions

Because the research typically points to interventions having a stronger impact on younger children, this study will concentrate on pre-adolescent girls ranging from ten to eleven years of age. It would be interesting to conduct a study to determine whether an alternating treatment design would show that the amount of relational bullying can change over three phases: a no treatment phase, a character-building phase, and a character-building phase with consequences.

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A Literature Review of Intervention Methods for Children with Autism and Effects on Social Interaction

by

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Problem behaviors are common concern for children with developmental disabilities, including autism. This disruptive behavior can interfere with the education of all the students in the class; both the one causing the disruption and the one's who are sharing the classroom. With regards to children with autism, this disruption can interfere with their social interactions, as they will be labeled as "troublesome" or "different." As defined in Webster's New World Dictionary (1995, p. 40) autism is defined as, "a mental state marked by disregard of external reality."

According to Bauminger (2002), social impairments are considered to be among the core deficits associated with autism. These children tend to have a difficult time in social initiation and are caught in a vicious cycle of social isolation. Scattone, Wilezynski, Edwards, and Rabian (2002), stated that children with autism need to be intervened as quickly as possible given that these children tend to become disruptive due to their social impairments. The focus of the articles included models and effectiveness, literature review, interventions, results, and implications.

Models/Effectiveness

Bauminger (2002) described the process used in exploring whether high-functioning students with autism would demonstrate improvements after their treatment. First of all, the children selected were 15 high functioning students with autism (4 girls, 11 boys) between the ages of 8-17 years old. All the participants, except one, were fully included in the general education setting. The measures used consisted of a problem solving measure, an emotion inventory, observations, and teacher reports were also collected to demonstrate the child's social skills. Bauminger (2002) describes the problem solving measure as a frequently used tool designed to examine the child's cognitive reasoning behind their problem solving process and as a means of examining their problem solving skills. It consisted of nine hypothetical social problems such as, initiating conversations, giving help, sharing, and solving a conflict.

The child was given a story to complete, however, they were only provided with a beginning and an end, and they needed to come up with the middle of the story. Children's answers were scored based on whether they had used a passive or active solution to the problem, whether their answer was relevant to the question at hand, and finally for their content. Next, the emotion inventory was used to measure the child's experience and understanding of 10 simple and complex emotions, like happiness, sad, pride, and guilt. Each child was asked to explain the emotion and provide an example as to when they have felt that way. This was analyzed based upon the child's knowledge, audience, and general versus specific. Moreover, children were also assessed by observing their interactions with their peers for two fifteen minute periods before and after the intervention. The child's behavior was recorded, noting whether they were or were not involved in positive peer interaction. Furthermore, Bauminger (2002) stated that the Social Skills Rating Scale-Teacher Version was used to rate the student's overall social skills. This questionnaire consists of items that encompass the three social skills of cooperation, assertion, and self-control.

In a study conducted by Hastings (2003), the study consisted of 130 mothers and siblings of 78 young children with autism. In all the cases, the mothers were the biological parents of the child with autism and in all but two cases they were the biological parent of the sibling. The siblings were on the average 6.70 years of age. The procedures used were a questionnaire to elicit the demographic information, an autism behavior checklist, a family support scale, and a sibling behavioral adjustment. According to Hastings (2003), the Autism Behavior Checklist (Volkmar, Cicchetti, Dykens, Sparrow, Leckman, and Cohen, 1980) was used to determine the level of the child's autism. In addition, Dunst, Jenkins, and Trivette's (1984) 18 items Family Support Scale was used to measure social support for the family. Two scores resulted from this measure, the availability of informal support such as friends and family, and the availability of professional support. Furthermore, the mothers were asked to complete the Strengths and Difficulties Questionnaire (1997) which is a measure of sibling behavioral adjustment questionnaire.

Scattone et al. (2002) studied their model with three children with an existing diagnosis of autism. These children were selected from an elementary school in the southern region of the United States. Participants were between the ages of 7 and 15 years, they were capable of communicating and were all in a self contained special education classroom. Each child had a particular behavior that interfered with their capability to properly socialize with other peers. One participant would consistently tip his chair backwards until he fell to the floor. Participant number two would consistently stare inappropriately at females during recess. In addition, staring would precede masturbatory behavior. Participant number three would constantly shout during math class, disrupting the other students in the classroom. However, all three students did have one thing in common which was that they could all read. Thus, a child-specific story was developed to target each participant's respective disruptive behavior. A multiple baseline design across participants was used to evaluate the effectiveness of the social stories to reduce the disruptive behavior.

Loveland, Pearson, Tunali-Kotoski, Ortegon, and Gibbs (2001) described their model of consisting of 19 participants with autism and 19 participants without autism. The participants were selected by word of mouth, outpatient child psychiatry clinics, and through cooperating parent organizations. All the participants were at least 6 years old and no more than 14 years old. Moreover, all participants were required to have a verbal mental age and nonverbal mental age of at least 6 years old. Participants received a psychometric assessment, parent report, developmental history, and clinician ratings. All participants who met criteria were then scheduled for the experimental tasks. In the experimental task, participants were asked to make judgments of the appropriateness of the adult actors' behavior shown on a videotaped in staged scenes. Each scene was formulated to depict an appropriate or inappropriate interaction, the participants responses were videotaped and transcribed after each vignette. The data was later coded by two separate and different investigators who did not know which participant was diagnosed as having autism.

Bauminger, Shulman, and Agam (2003) described their model as consisting of 33 preadolescents and adolescent males with autism and two girls with autism. Their ages were between 8 and 17 years old. The children were recruited through the Special Education Department, typical through the public school system. Bauminger et al. (2003) stated that the Autism Diagnostic Interview-Revised (Lord & LeCouteur, 1994) was administered to the parents of the children in order to provide additional information about the child's developmental histories. The

children were administered the Social Interaction Understanding-Picture recognition in order to assess the child's understanding of peer interaction, they were shown colored drawing picture depicting a peer interaction scenario, which was developed especially for this study. Children were then asked questions regarding these scenarios in order to determine their social interactions. In addition, to assess the child's social interaction behaviors, each child was observed for a total of 1 hour during school recesses and snack times. Observations were made on the specific behaviors in each of the three global social interaction scales. Furthermore, in order to assess the impact of loneliness on these children, the authors interviewed them asking them to define loneliness and then analyzed their answers according to the inclusion or exclusion of the emotional and social aspects of loneliness. Moreover, the participants were also given the Loneliness Rating Scale (1984), which is a self reporting assessment of the child's feelings of loneliness.

Interventions/Results

In Bauminger (2002) study, the intervention used was a social-emotional intervention where the teacher was the primary conductor of such an approach. The teacher was in charge of teaching social problems and how to resolve them, also, supporting and guiding her class. This intervention was actually included in each participant's individualized education plan as a goal that the student needed to work on 3 hours per week for a 7 month time period. The curriculum used consisted of an adaptation of Spivack and Shure's (1974) Interpersonal Problem Solving Model and of Margalit and Weisel's (1990) *I Found a Solution* social skills program (Bauminger, 2002). In addition, the child was also paired up with a peer and they worked on a specific social skill twice weekly for the 7 month interval. Moreover, the parents were also involved to help motivate and support his/her child. The parents were kept informed as to what social skills their child was working on that day and given special assignments to follow up at home. Results showed a significant level of change for all the variables tested. For their social understanding, results revealed ($p < .001$), emotional understanding ($p < .001$), showing a progressive tendency in their basic knowledge of emotions, social interaction results revealed ($p < .001$), positive social interaction revealed effect for time. Children with autism were more likely to initiate and respond positively to their peers after treatment.

With regards to Bauminger et al. (2003) model, there were a series of comparisons within the group of children with autism and those without autism. The first set of statistical analyses focused on the child's social interaction understanding which yielded ($p < .01$) and which compared to typically developing children showing a fewer social alternatives. In addition, with the social interaction observations, it was revealed that overall, the majority of children's social interactions in both groups were coded as positive ($p < .001$). However, children with autism demonstrated significantly more physical proximity and functional communication toward typically developing children. With regards to the loneliness self report, results indicated that children with autism presented higher feeling of emotional loneliness in comparison to typically developing children ($p < .001$). In the study conducted by Loveland et al. (2001), results indicated that both groups could detect inappropriate behaviors most of the time, and correct behaviors almost all of the time ($p = .007$).

With regards to Scattone et al. (2002), baseline data was collected by undergraduate and graduate students after receiving training. During the intervention phase, the teacher introduced the social story to each participant on an individual basis. The teacher read and assessed

comprehension by the student. Students were given comprehension questions to be answered. Each participant then for the following days read the story to the teacher at their pre-selected time period. The graduate and undergraduate students recorded the occurrence of disruptive behaviors using a 10 second cued partial interval recording system during 20 minute observations for each participant 3 times per week. Moreover, there was a daily checklist that the teacher would use to determine if the child had read the social story for the day at the specified time period. The data showed that all three participants demonstrated a reduction in their respective disruptive behaviors after the social story was introduced. However, the level of improvement varied among each of the participants. For the first participant, his chair tipping behavior ranged from 48 to 60% of intervals during baseline, decreasing to 17% of intervals after intervention. For the participant who stared at the women, his baseline average was 66.9%, decreasing to an average of 18.3%. Moreover, for the participant who shouted during class, his baseline was 16.0%, decreasing to 5.1% of the intervals after intervention.

In the study conducted by Hastings (2003), the surveys were collected and questionnaires returned. The mother's ratings of sibling behavioral adjustment showed that the present sample of siblings of children with autism differs significantly from normative data on three of the SDQ problem domains and the total behavior problems score (Hastings, 2003). The statistical analysis of ratings of family social support and sibling behavioral adjustment revealed that older siblings were reported as having more pro-social behavior ($p < .05$). Secondly, those children whose fathers acted as a therapist on the ABA program were rated as having fewer pro-social behaviors than those children whose fathers did not have this role ($p < .05$).

Conclusions

The outcome of this review demonstrates that with proper intervention, children with autism can enhance their social competency. Researchers have documented significant improvement in areas of intervention such as social cognition/social problem solving, emotional understanding, and social interaction (Bauminger, 2002). In addition, growths in children's positive behaviors towards social interactions have been noted. Furthermore, the research shows that overall, participants in the study conducted by Scattone et al. (2002), demonstrated a reduction in their respective disruptive behaviors, thus increasing their socially accepted behaviors.

The nation is in the midst of debating what constitutes effective interventions for children with autism. Children with autism are characterized by problem behaviors and under socializing characteristics. First of all, what is thought of a being socially acceptable behavior is determined by the society in which an individual belongs. Thus, socially accepted behaviors are taught and not born with the individual. Secondly, research has shown that by incorporating interventions into a child's daily routine, the problem behavior will reduce in an impressive manner. Third, a society in which all of its members learn to live in a peaceful manner is a desirable trait. Thus, the school system needs to try to fulfill its responsibility by preparing its' students for adulthood, hence, incorporating social skills into the student IEP's is a desirable thing. Finally, all student's with disabilities need to have their education personalized to meet their needs. If autistic children tend to have difficulties with behavioral problems which lead to social isolation, it is imperative that their

education be individualized to reflect the need of acquiring acceptable social skills. The research question to be addressed is: Will providing children with autism social stories as an intervention reduce their problematic social behavior and increase positive social behaviors?

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The effects of interventions on the participation of children with autism within the classroom setting.

By
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Abstract

A review of the published literature on social communication skills and interactions within classroom settings was conducted, to determine effective interventions and strategies that increase socialization within an academic setting. Articles on social communication published between 2000-2003 were reviewed. Results of the research studies documenting the impact of social communication skills and interventions are described.

Introduction

The social interaction and communication methods of autistic children have been studied over the past two decades. This developmental disability's complex social changes and growing populations have prompted researchers to investigate possible interventions and strategies to encourage and decipher the communication skills and unusual social patterns of children with autism. Due to this disability's evident challenges, it presents itself as a socially valid research topic for the benefit of the public interest. In addition, educating an individual about this disability through research, is to promote, create and discover new plans of progress or action to better the lives of all those with the disorder. The focus of the articles included literature reviews, methods, interventions, implications, and results.

Definitions of social communication skills and interaction in these articles varied greatly. Social communication has been defined as the eye contact, non verbal joint attention, and motor peer imitation movements used when children engage in interpersonal interchange. In addition, it is defined as the mutual gazes and turn taking verbal and non verbal experiences in their daily life (Hwang and Hughes, (2000). Garfinkle and Schwartz (2002) and Kamp et al. (2002) proposed a peer imitation approach to the definition of social communication skills, or social interaction where socialization was achieved through group participation and instructional engagement.

There were five research-based articles. One was categorized as social-language interactions through instructional methods: Hwang and Hughes (2000). Two were categorized through training and teaching strategy techniques and interventions Kohler, Steighner, and Hoyson (2001); Marks et al (2003). The last two articles were categorized as peer group imitation to increase participation in activities: Garfinkle and Schwartz (2002); Kamps et al. (2002). To set the empirical context for autistic socialization curricula, the results of the research studies (categorized as methods, interventions, implications and findings) are detailed in this review.

Methods

In the study conducted by Garfinkle and Schwartz (2002), the process of peer imitation for participation purposes was discussed and applied using the multiple baseline design. The purpose of the study was to evaluate the effects of how group activities encourage peer imitation within children. "Children learn skills that they have seen another, usually a peer, perform" (Goldstein & Brown, 1989, 16). Therefore learning socialization through a peer is observational and predicted to occur.

Children with or without disabilities learn social skills differently. As a result, if a child is placed in an academic group, within that group there will be different levels of social interactions depending on the level of autism each child possess in this case. Therefore these researchers try to prove that socialization can be learned through modeling. Their study was conducted with four boys in a pre-school setting. Three of the participants were diagnosed with autism, and the other one was labeled as developmentally delayed. All the children in this study had a significant delay in the areas of communication and socialization. The most prominent of their problems was their inability to interact with their peers. The study was conducted through strict observation by the teacher. The boys ranged from 3 years to 5 years of age. The study took place in the children's classroom which was an applied setting. The data was collected during "free play" which was a 40 minute period where the children could attend learning centers for play, art sensory exploration, fine motor activities (Garfinkle & Schwartz, 2002), and small group times to assess the implementation and effectiveness of peer imitation. Assessment was focused on non-imitative social behavior, non-social engagement, and peer imitation behaviors. During small group activities, the four children were included along with children who had no disabilities. While in their small groups, in order to encourage peer imitation, the teacher would promote communication through verbal cues, reinforcement, games, mandatory sharing of objects, praise, and other activities like a sort of training so the children would be forced to interact and learn this behavior. When the children began their free play sessions, no prompting or interventions were enforced or given, the children were left alone to interact and engage in peer imitation by themselves or with the training they received when in small groups. The researcher then went on to the follow-up phase which was to discontinue the small group "training" sessions. During follow-up, the teacher conducted the small group sessions pretty similar to the free play where children were given the same materials and instructions and were left alone to interact if at all. Data was collected during the course of a five month period. Data was collected using an interval system. The observation system used intervals of 10 seconds (Garfinkle & Schwartz, 2002). Socialization was recorded based on both verbal and nonverbal behavior.

In the study conducted by Kamps et al. (2002), peer training and imitation techniques were applied through different interventions and transmitted to students during group assignments. Within this article, there were two studies. Study one researched peer training within cooperative learning groups in one school with a small number of students. Study two replicated these results with thirty four students across multiple school districts and school years. Measures used by researchers were video tape and direct observation. Study one included five students with autism and fifty one general education peers, who attended an elementary school. The focus was initially to "train peers to assist parents in vocabulary and facts from their social studies curriculum and to complete a team activity" (Kamp et al. 2002,

175) and then achieve socialization free time after activity and observe how they interacted as a result of the rapport that they should have already gained from their peer tutor. Comfort levels should have heightened in order to socialize better. (Kamps et al. 2002). Initially the teacher would model in 10 minute intervals how the peer tutor was supposed to interact. Students were then allowed to engage in free play time for 10-15 minutes in which they received points for appropriate use of social skills (or as the study called it, *social skills groups*). Baseline data was obtained for the cooperative learning groups. Social Skills groups were measured as follow-up. The design was set up as follows 2 weeks of baseline, 4 weeks of social skills groups, 2 weeks of more baseline, and 4 weeks of social skills groups. Dependent measures included the frequency of interactions and total duration of social interaction time during 5-minute probes and the frequency of initiations to the target students by the peers (Kamps et al., 2002). In study two, instead of five students with autism, thirty four students with autism were studied. Children in two groups were measured just like in study one: a social skills group and a cooperative learning group. Children in both groups were tested to see if the type of group would decrease or increase peer interaction more or less.

Kohler, Anthony, Steighner, and Hoyson (2001) described the training and teaching strategy techniques and interventions. Four pre-schoolers with autism and thirty five of their classmates participated in this study. Social interaction was measured in this study through observation while the children were given a forty minute activity where they could choose from eight different stations to play in. Observations were done on one to two children per day due to scheduling difficulties. The instructional strategy used in this study was the "Naturalistic Approach which facilitated the child's communication and social interaction with others, and stimulated the child's interest, enjoyment and play within the activity they were engaged in" (Kohler, Steighner, & Hoyson, (2001), p.100).

In the study by Marks et al (2003), instructional management tips to encourage the socialization of autistic children in the classroom were described. Different strategies and interventions were presented to allow teachers to choose which would work best with their classroom management procedures. Methods of instruction for children with autism include: mnemonic devices, increasing time on tasks, and maximizing creative strategies for conduct whole class instruction.

Hwang and Hughes (2000) described the effects of language intervention programs to increase socialization. The participants in their study were three boys enrolled in an early intervention program. Method used in study was careful observation of participants. Teachers and partners who conducted the study interacted with children using household objects, toys, crayons, play dough art supplies, etc "If a child lost or showed no interest in a play item, it was removed and replaced with another item" (Hwang & Hughes 2000, p. 20). This method was used to determine what items called the children's attention more and which did not. One must note that socialization is also considered eye contact, motor imitation and non verbal cues. A person does not just socialize through verbal modes. The children's ages ranged from 32 - 43 months.

Interventions

Kamps et al (2002) used the following peer tutors to conduct their study: To increase socialization in children with autism . Peer tutors assigned to children with autism helped and encouraged them to learn social behavior by adjusting and becoming comfortable with the peer. After the child with autism completed the tutoring session, it was expected that they would socialize at a higher level with their peers or others when given free time than when not assigned a tutor.

The intervention used by Garfinkle and Schwartz (2002) in their study was peer imitation. They behaved through the imitation of students who were not disabled, by the modeling effect would help children with autism imitate social behavior and learn interaction skills. Modeling and imitation is the key intervention in this study.

In the study conducted by Marks et al. (2003), teachers were given instructional management tips to support the idea of heightening socialization trends for their students with autism. The use of manipulatives, praise, reinforcement, mnemonic devices, longer academic work periods, and sensitivity to whole class instruction lectures, helped them obtain higher levels of interaction. It also helped them become more comfortable with their academic environment.

Kohler, Anthony, Steighner, and Hoyson (2001) used the intervention of "Naturalistic Teaching Strategy" to promote socialization. "Naturalistic teaching involves a variety of techniques, including milieu teaching, incidental teaching, the mand-model procedure, naturalistic time delay and activity based intervention" (Bailey & Wolery, 1992, p.25).

Hwang and Hughes (2000) focused on implementing language intervention programs. These programs have been developed to address the link between socialization and language. Language could be considered non-verbal gestures, such as eye contact, gazes, and motor movements.

Results

Garfinkle and Schwartz's (2002) study revealed that all of the children with autism exhibited an increase but still small number of peer imitations, and the levels of social interactions remained low. One can conclude from those results that the intervention used and the method applied was not as effective as proposed. However, this study is socially valid. Socialization is an important part of life therefore everyone who is questioned on the subject will agree with its significance.

Kamps et al. (2002) study one revealed that those who participated in both types of peer groups (the social skills group and the collaborative learning groups) rather than just participating in one group showed an increase in socialization trends and benefits. Social groups with peers showed a much higher level of interaction with others than those students who did not participate in any group. These results were yielded in study two as well. Reliability was calculated in both studies. The interactions of children with autism improved greatly with the group who were not disabled as a result of the interventions and

implementations of the peer training model. This study is socially valid due to the importance of interaction in today's society.

Kohler, Anthony, Steighner and Hoyson's (2001) study revealed that as the teachers gained more training on Naturalistic ways of teaching, the children's social interaction skills within the classroom increased. These were gradual increases due to teachers training sessions conducted in forty five minute sessions with the pre-school director. Each of the participant's level of participation began passive and later exceeded 70%. Each child's level varied, but the overall consensus of the study was that social interaction increased with the implementation of the strategies. This study is socially valid due to its significance and impact on the daily lives of those involved and those presented with it.

The study conducted by Hughes and Bogseon (2000) revealed that the frequency of the social communicative behaviors in the participants during baseline was minimal. During the training phase, behaviors were more responsive to the teachers and partners conducting the study while the object was shown to the child. Increases in attention for attention seeking behaviors was minimal compared to eye contact and motor imitation (Huges & Bogseon , 2000). The intervention of verbal and non verbal language was successful in this study. In addition, this study is socially valid due to the emphasis on all types of communication.

The study by Marks et al. (2003). revealed that the instructional management tips used in the study were qualified to increase the socialization levels of autistic children if used effectively and diligently. If teachers subjected themselves to the training, the techniques to be used in their classrooms would increase the interaction skills of children with autism. Tips and organization methods used in study should be applied carefully in a classroom environment with any type of developmental disability. They allow children with autism as well as children with other types of disabilities to feel comfortable and secure in their educational environment along with increasing their socialization levels. This study is socially valid because it describes techniques and strategies to benefit and assist children within the autistic spectrum condition.

Implications

Many implications can be gathered from this brief review of literature on the social - communication skills and interactions of autistic children within the classroom setting. Socialization is a significant component in a person's life. Without socialization and interaction human beings could not communicate feelings and emotions. Socialization is measurable and of importance to researchers. The socialization of autistic children is in part extremely interesting due to it complex patterns, rewards and challenges. To attempt to understand the social or lack of social behaviors in relation to Autism one must conduct numerous research studies seeking and testing various interventions to determine what works and what does not. Socialization is important for every day to day life activity and is practiced by all universally. Those who lack social skills unfortunately are labeled as disabled. As a result, researchers have developed and continue developing questions and topics to investigate areas concerning this disability in order to increase social levels through interventions that have worked in their previous investigations. Interventions that have been reliable and proven to work in the past can be applied for future use in classrooms, homes, work places, and day to day life activities benefiting the lives of all those who experience the condition.

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Analyzing Effects of School-Based Consultation Interactions

The Effects of Consultant Monitoring of Behavioral Interventions

By

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The role of the school psychologist as consultant in the process of collaborative consultation has recently gained attention. The literature review was designed to address how consultant behaviors affect consultation outcomes. The process included finding different articles that seemed more specific to the topic, yielding eight articles that reported original research published the following major journals: *Journal of School Psychology*, *Professional School Psychology*, and *Psychology in the Schools*.

The role of school psychologist as consultant in the collaborative process of problem solving is an increasingly important one. There is a considerable amount of fully researched and validated evidence that consultation is a very effective means of providing services to students. As the field of school psychology evolves into a model of service delivery that focuses on prevention and intervention the collaborative problem solving process between teachers and service delivery professionals becomes even more integral. Ultimately, it is the teacher who is responsible for the commitment to implement the interventions that are collaboratively developed with the consultant. Many studies have explored the relationship between the consultees (teacher) perception of different consultant (school psychologist) variables [Busse et al (1999), Graham (1998), Hughes & DeForest (1993), Knoff et al (1995), and Truscott et al (2003)].

Knoff, Sullivan, and Liu (1995) used a heuristic scale (the Consultant Effectiveness Scale) which focused on the characteristics and behaviors of effective consultants, a large sample of 396 classroom teachers (79% female which is representative of larger population of teachers in this district). The survey respondents had varying levels of experience from across one large, individual school system. The purpose of the survey was to determine the teachers' perception of consultant behavior and overall effectiveness. The questionnaire was distributed through the mail. Each research packet contained a generic definition of consultation and asked that they rate the consultant characteristics/behaviors, on a 5 point scale according to perceived importance to effective consultation.

There were two factors generated using a factor analysis approach. Factor I: Consultation Knowledge, Process, and Application, and Factor II: Consultant Interpersonal and Problem Solving Skills and Qualities. Significant differences were found on Factor I. Teachers between the ages of 25 and 30 years of age rated the items in Factor I significantly different from the older age groups. The importance to consultant effectiveness of the Factor I items were found to increase with the older groups (31+). Teachers with BA degrees rated Factor I items significantly lower than teachers with advanced graduate degrees. Teachers with less than 15 years experience rated items in Factor I significantly lower than more experienced teachers.

It is suggested that increasing knowledge, levels of education and experience may positively affect the teachers' understanding of and sensitivity to the importance of specific skills in the consultation process. Significant differences were found on factor II as a function of gender. Male teachers rated Factor II items (interpersonal and problem solving skills and qualities) significantly lower than did the female teachers.

There are a number of limitations to this study. Generalizability is compromised by the geographic and sample specific limitations, response bias and interpretation bias. Also, given the large number of analyses completed with the data there is a possibility that some results occurred by chance. The social validity of the statistically significant results may be questionable because the ratings on the 5 point scale were so similar that no functional differences actually existed. The believability of both the definition of the consultant behaviors and questionnaire items as they relate to consultation outcomes are questionable because of possible lack of consistency among consultants. Finally, a study that focuses on perceptions or beliefs is much less valid than actual consultant and consultee behaviors occurring in real sessions that result in real outcomes. Consultation outcomes are deemed successful only when consultees and clients experience it as so.

Recognizing the integral role verbal behaviors potentially play in the effectiveness of a given consultation, Busse, Kratochwill, & Elliott (1999) measured the effect of verbal behaviors during consultation on child treatment outcomes. The primary purpose of this research was to explore the relations among consultant-consultee verbal interactions, and child outcomes through regression analyses using the Bergan & Tombari (1975) Consultation Analysis Record (CAR) categories as predictors of treatment outcomes. The CAR was developed as a research and training tool by Bergan and Tombari, designed specifically for verbal coding of actual behavioral consultation interactions. The CAR appears to possess adequate content validity through definitions of verbalizations in important domains of behavioral interviews. The Consultant Evaluation Form (Erchul, 1987) is 12-item, seven-point scale that measures consultees' perceptions of the effectiveness of consultants. The index of Convergent Evidence Scaling is the method used for quantifying multiple outcome indicators.

This study involved analyses of an existing data base collected over 8 years from 3 grants concerning the training of graduate students in behavioral consultation. Participants included graduate student school psychology consultants (19 female, 6 male) each of whom completed competency-based training in behavioral consultation, teacher consultees, and children, ranging in age from 3 to 13 years, who received either individual or group consultation services. Three standardized interviews were conducted for each case to identify a problem, develop a treatment plan, and to evaluate the treatment plan. Out of 65 cases 37 were retained. Audio tapes of the interviews were transcribed verbatim and coded on the CAR. A minimum of 70% interrater agreement was deemed adequate. Consultation cases were conducted with single-case experimental designs, with most using an AB design.

Several general trends were found. Behavioral consultants exhibit more control of the consultation process than consultees. Consultants' elicitors (requests for action/information) were not significantly related to outcome measures. Positive outcomes may be more likely when consultants are more efficient in specifying behaviors and plans. A strength to this study was the social validity of studying verbal interactions in consultation. Communication and relationship building are consultant skills which can be central to the success of problem solving. Also, consultant interview effectiveness has been related to consultee satisfaction and successful problem identification.

There are several limitations associated with this study. The data used was from teacher observations which were not assessed for accuracy. The limited sample size and use of graduate students reduce generalizability. Also, the results may not generalize to the use of different consultation models. The use of an existing data base not specifically designed for verbal behaviors decreases believability. Interrater agreement standards were set at 70% which may indicate a lack of consistency in the results. Regression analysis fails to capture the interactive nature of verbal behavior. Thus, neither the CAR nor the analysis used provides a direct method for analyzing the interactional nature of consultation. Ultimately, it is unknown whether the data accurately reflected treatment outcomes.

In business literature, Rational Persuasion (RP), the use of arguments and factual evidence to persuade that a request is viable and likely to result in task attainment, has been identified as a viable and likely way to influence consultee perceptions about proposed interventions. In Truscott, Richardson, Cohen, Frank, & Palmeri (2003), the purpose was to provide an initial, empirically based exploration of the use of RP in analog consultation cases. The study looked at adding the elements of RP to school-based consultation explanations that feature implementation of informational power.

The research employed a within-subjects design using actual teachers enrolled in graduate education courses to investigate the use of RP school based consultation. Analog video consultation scenarios were presented to 4 groups of teachers (71 total) over the course of 3 weeks. Participants rated the intervention acceptability, effectiveness, and hypothesized commitment-to-implement the intervention using the Behavior Intervention Rating Scale (BIRS: Elliot & VonBrock, 1991). The BIRS requires participants to rate 24 statements about a proposed intervention on a six-point Likert scale. Reliability and validity of this instrument, as a measure of intervention acceptability and effectiveness, is reported to be .97 (coefficient alpha).

Nine videos (3 interventions with 3 conditions each) featuring an enactment of a consultation session were used. The "consultant" was a male school psychology graduate student in his early thirties. The "teacher" was a female school psychology graduate student in her early thirties. Interventions chosen for the study were token economy, contingency contract, and response cost. One script featured a description of why it was important to both the teacher and the student that the intervention be implemented (RP importance). The other experimental condition was a script that featured 3 anticipated objections and responses to those objections (RP objections).

Results indicated, contrary to researchers efforts, intervention type significantly influenced the participants ratings. For example, response cost was rated significantly higher than the other interventions on both the commitment and acceptability scales. For the presented situation and interventions the teachers' intervention acceptability ratings were positively influenced by RP for some situations, but not independent of the intervention. Attempts to influence consultees through informational RP result in effects that are too weak to overcome consistently the consultee's inherent perception of a proposed intervention. The results of this study suggest that RP is inconsistently effective and there is not enough known about it to support its use in school-based consultation.

Limitations in this study include the use of analog video. This may not reflect real consultation and therefore, generalizability to real situations is highly suspect. Also, the results may not be generalizable to teachers trained in institutions other than the ones in this study. The constructions of the video consultations were not coded to any known standards of consultation and little is known about the believability of those sessions. Caution must be used when interpreting the results of outcomes on the basis of perception rather than direct measures.

Hughes and DeForest (1993) research the relationship of selected Consultant Analysis Record (Bergan & Tombari, 1975) categories to outcomes in actual consultant interactions and the relationship between consultants' supportive verbalizations and consultation outcomes. This study attempted to use direct empirical evidence to support these relationships. The subjects were 17 consultants (advanced doctoral school psychology students) and 17 consultees (private and public school teachers). The consultants were trained in the expanded behavior consultation model that combines behavioral consultations' emphasis on problem-solving stages and behavioral approaches to the resolution of classroom problems with an emphasis on the relationship with the consultee and on adapting consultation goals and methods to consultee characteristics (a systems perspective).

All teachers sought the consultants help for a problem they were experiencing with a particular student. Consultants were instructed to attempt to develop a problem formulation in the first interview which was followed by two to five additional interviews as necessary. Following the end of the consultation interviews, the Consultant Evaluation Form was mailed to the consultee and each consultee was assured that the consultant would not be told the results. The CAR was used to determine the frequency of consultant verbalizations from transcripts. The control category consisted of elicitors (verbalizations that give information) and emitters (verbalizations that request action/information).

Two trained raters coded a random sample of 170 thought units and achieved an interrater agreement of approximately 97%. Generally the results indicated that consultees were pleased with the consultation and a majority stated that they did something different as a result of consultation. Additional results showed support that consultants who provide personal support to consultees and offer causal hypotheses regarding the consultation problems during the first interviews are rated as more effective by the consultees. Consultants who approach the initial stages of problem solving by generating hypotheses about the problem are also viewed as more effective. The most interesting findings to emerge from this study were that different consultant verbal behaviors may be differentially effective in different models of consultation. It was also found that consultees do not respond well to consultants who ask many closed-ended questions. These findings suggest that consultants who adopt an expanded behavior consultation approach should (1.) minimize their use of closed ended questions that restrict the consultee's response, (2.) increase supportive statements, and (3.) encourage conjoint exploration of the possible reasons for the problem.

Certain limitations of this study were noted. Being that only the first interviews were coded, the findings may not generalize to subsequent interviews. The use of subjective perceptions of consultation outcomes is an important study limitation. If consultation verbal processes relate only to consultees' perception of the consultant or of the consultation interaction

and not to direct or indirect measures of change by the teacher, the findings have little social validity.

Graham (1998) investigated consultee preferences for a collaborative versus and expert consultation approach. The rationale behind this study was that collaboration has been espoused as the superior approach in the literature, less so by refuting the expert approach than by rejecting it. Given the general imperative in the literature to collaborate and avoid behaving as the "expert", this study tested two predictions and gathered descriptive evidence for a third question. (1) Within the context of a specific request from a teacher, consultant ratings will be higher if the consultant responds by giving specific advice. (2) Within the context of a vague request from a teacher, consultant ratings will be higher if the consultant responds in a collaborative manner, (3) Does treatment acceptability differ as a function on Consultant Response type?

The design of the study was a 3x2 between subjects factorial analysis which called for teachers to be exposed to the manipulations of 2 independent variables. Teachers (enrolled in university course) watched videos of either a specific request for assistance or a vague request for process classification. Teachers in the video received one of three responses from the consultant: specific expert advice, presentation of basic problem-solving process, or request for teacher to collect baseline information. The Consultant Effectiveness Form developed by Erchul (1987) was used as a dependent measure in this study to assess teacher perceptions of consultant effectiveness.

Results of this study suggested differential preferences for collaboration and expert models. When a request was made by a teacher in a vague manner, a collaborative approach was preferred by individual teachers viewing videos of consultative interactions. However, it was found that when a teacher request was clear in terms of problem identification and previously tried approaches, an expert approach was preferred. These results suggest that collaboration receives higher ratings only within the context of a vague consultee request. Perhaps a problem-solving process is seen as helpful within the context of a vague request because the process itself brings about clarity. A surprising finding of this study was the poor ratings received by the consultant asking for more information before developing an intervention. Perhaps the typical consultee expectation for initial session is the development of an intervention plan before ending the session.

The problems presented in the videos may not be generalizable to typical school settings. Operationalization and control over experimental conditions creates limits on the generalizability of the findings. Results may have differed significantly depending on the nature and severity of the presenting problem. Videotaped vignettes depicting obvious role-plays (not professional actors or real situations) of brief consultation sessions limit the power of experimental manipulation and generalizability. A lack of clarity and believability exists concerning the definitions of expert and collaborative consultation. The present study attempted to use working definitions of both, however it can be argued that it was an oversimplification and non-empirically based. Also, this study is based on perceptions of potential consultees and not actual consultees. Different findings might result in real life sessions between actual participants. Perceptions are irrelevant if consultation does not lead to outcomes for children.

The goals of school consultants have to do with the lives of children, and not necessarily high survey ratings depicting the perceptions of consultees (fictitious or actual). The finding from

study's that measure consultee's perception of the consultant or of the consultation interaction and not to direct or indirect measures of change by the teacher have little social validity. The research in this area reflects a gap in both depth and scope of an applied consultation process and actual clinical outcome. Outcomes studies that measure actual implementation of agreed upon intervention strategies that occur through the consultation process, and ultimately benefit children warrants further research.

Conclusions

Based on the review of this brief review literature, it is clear that an important component of successful implementation of interventions might be the consultant monitoring of behavioral interventions agreed upon during the initial session of collaborative consultation between teacher (consultee) and school psychologist (consultant). An investigation of whether a consultant monitoring the implementation of a proposed intervention leads to consultation plan success (treatment integrity) would add to the extant research base.

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The Effects of Consultant Behavior on Consultee Implementation of Interventions

by

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The school psychologist has been an active member of school-based consultations for quite some time. The consultation process has been a subject of much debate as researchers try to investigate consultation variables and outcomes [Conoley, Conoley, Ivey & Scheel (1991), Bergan & Tombari (1976), Hyatt & Tingstrom (1993), Cowant & Sheridan (2003), and Gutkin (1999)]. A consultation is a service that brings together a consultant (school psychologist) and consultee (teacher) in a collaborative approach to discuss how a particular client (student) can benefit most from their learning environment. A successful consultation is based on whether the consultee tried the recommendations provided by the consultant. Of major concern is the reluctance observed in some consultee's to implement the interventions recommended by the consultant. Some interventions are not as easily accepted as others. If the intervention is not accepted then it is most likely not implemented by the consultee. Some interventions are not accepted based on the consultee's belief about whether or not that particular intervention is well-understood and useful.

Conoley, Conoley, Ivey and Scheel (1991) investigated a consultation technique aimed at increasing the acceptability of an intervention. Conoley et al (1991) decided to use an individualized intervention rationale that matched the consultee's perceptions or beliefs. It was hypothesized that utilizing this technique would increase intervention acceptability. Three main conditions were used: matched rationale, mismatched rationale, and no rationale. The matching rationale was designed by integrating the consultee's beliefs about the presenting problem, the cause of the problem, and the belief about a particular intervention. The participants included 37 elementary and secondary teachers enrolled in a graduate level developmental psychology class. The procedure required all participants to read a description of a fabricated problem and they were each required to provide their beliefs about the case on a written format. Next, they were provided the original problem description, once again with a particular intervention and rationale.

The consultee's belief about the fabricated case provided the basis for the matched rationale. The participants were required to rate the acceptability of the recommendation based on the case, rationale and intervention. Everyone was exposed to the three different conditions. The acceptability of the intervention was measured using the Intervention Rating Profile (IRP); a 15 item assessment instrument using a 6 point Likert scale. A univariate one-way analysis of variance for repeated measures was the method of analyzing data. The statistical analysis revealed a significant difference for the matched conditions versus the mismatched and no rationale at ($p < .05$). As Conoley et al (1991) hypothesized, a rationale that matched the consultee's belief about the case description led to an increase in acceptability of the proposed interventions. The results further suggest that a consultant should be able to provide a variety of interventions from many different perspectives. Consultees may feel more comfortable using an intervention that closely matches their worldview. Conoley et al (1991) suggest that getting to know consultee's beliefs and worldviews in order to provide an acceptable intervention can be most beneficial. A major limitation identified in this study is that this was an analogue situation and the generalizability of this technique would be in question in real school-based consulting situations.

In school settings, the consultative problem solving process begins with a student being referred for psychological services. The assumption is that the problem solving model follows the following three stages: problem(s) identification, development of a plan to address the problem, and plan implementation to solve the problem.

There are a variety of consultant variables that may affect the consultation process, such as the effectiveness of service delivery, skillful manner in applying psychological principles to achieve problem solution, and the consultant's interviewing skills. In addition to these consultant variables, there could be consultation variables related to problem solving—that influence the consultative problem solving process. Bergan and Tombari (1976) suggested that the general success of the consultant may depend on the willingness of the consultee to implement a plan developed in consultation. In addition, as part of the problem solving process, a problem has to be identified which in turn affects the development of a plan to solve the given problem. The consultant's interviewing skills also play a major role with whether or not a problem solution is generated. Finally, the development of a plan, as part of the problem-solving process is related to the problem solution.

Of major interest is the combination of variables that are needed in order to facilitate the consultative problem solving process. For example, if consultant's interviewing skills were found to be highly related to one or more stages of problem solving, then training of consultants may emphasize that particular skill and so on. This is particularly important in order to train consultants in the kind of consultant characteristics needed to enhance problem solving. In addition, if consultative problem solving begins with problem identification, then without problem identification problem solving cannot occur. The central theme is to facilitate problem identification in order to enhance problem solving. Bergan and Tombari (1976) investigated which measures of consultant efficiency and skills predicted the occurrence of problem identification. In addition, they looked at what extent do consultant variables and problem identification predict plan implementation. Finally, they examined the degree to which consultant variables, problem identification, and plan implementation predicted problem solution.

The participants included 806 children enrolled in kindergarten through 3rd grade who had been referred for psychological services. The participants represented a wide variety of different ethnic backgrounds such as Afro-American, Mexican-American, Indian and white. Eleven psychologists participated in a training workshop aimed at promoting the acquisition of knowledge of psychological principles useful in solving learning problems, and training in consultation processes designed to promote effective communication with consultees. The following academic year, the newly-trained psychologists implemented consultation in their communities and were supervised by field representatives from the University of Arizona. The consultant measures selected for the study were: service efficiency, skills in applying psychological principles, and interviewing skills.

There were two measures related to service efficiency: average time from referral to the initial interview and psychologist case load. Skills in applying psychological principles to promote learning ranged from a variety of disciplines involving cognitive and behavioral psychology. The consultants applied the psychological principles in consultation using a four phase model: problem identification, problem analysis, intervention and evaluation. As Bergan and Tombari (1976) hypothesized, psychologists who applied a variety of psychological principles would be more

effective in achieving problem solution than psychologists who stuck to one particular principle. Psychologists who used a variety of different principles received higher scores than those who did not use a wide variety.

Measures of interviewing skills were obtained from interview transcripts. Four measures of interviewing skills were computed from the coded transcripts: relevancy of interviewing content, content focus, index of effectiveness of psychologist's verbal process, and index of message control. Inter-rater reliability was established for content (.87 and .90), process (1.00 and 1.00) and control measures (.88 and .92). Information on the occurrence of the problem solving phases was recorded based on the case reporting forms reported by each psychologist. Three multiple-regression analyses were performed. As a result, problem identification occurred in 43% of cases, plan implementation in 31% of cases, and problem solution in 30% of cases. The most significant result achieved was that consultant variables had the greatest impact on the initial problem identification phase of the problem-solving process at ($p < .001$). If the consultant lacked the skills necessary to problem solve, then it was most likely that the problem solving process was never initiated. According to Bergan and Tombari (1976), if problem identification was never achieved, then another course of action most likely occurred. Furthermore, when problem identification resulted, then problem solution definitely occurred. The findings in this study suggest that the consultative problem-solving process was useful in solving educational problems when combined with consultant skills and efficiency in problem identification. Bergan and Tombari (1976) emphasize the importance of intensive instruction in consultation in graduate training programs in psychology.

The consultant (school psychologist) usually relies on the consultee (teacher) to implement interventions in the classroom setting generated from the consultation process. Many factors can affect the acceptability of an intervention which in turn affects implementation. According to Hyatt and Tingstrom (1993), teachers may be influenced about an intervention based on presentation, label of intervention, rationale, and use of technical words (jargon). Some studies have suggested that the use of jargon may have a positive influence on teachers' perceptions of classroom interventions. Previous research has yielded positive results in jargon usage when describing a particular intervention such as time out. In addition, the modality in which the intervention was delivered seems to have affected its acceptance. Researchers suggest that the acceptability of jargon usage in describing a particular intervention may be more easily accepted when presenting it in writing than in oral language. This difference may be attributable to the more formal tone found in the written form than in oral language. Previous studies have been limited to the service delivery of paper and pencil format which in turn affect the ecological validity of such analogous studies. In contrast the Hyatt & Tingstrom study evaluated the methodological differences in intervention presentation modalities (written versus videotaped presentations), including a reinforcement based and a punishment based intervention, and using a wider spectrum of teachers.

The participants included 94 regular and special education elementary teachers employed in five public schools. The acceptability of the intervention was measured using the Treatment Evaluation Inventory (TEI), a 15 item assessment instrument arranged in a Likert-type format using a 7 point scale. Approximately, one-half of the teachers viewed the videotaped simulation of a consultation between a school psychologist and a teacher discussing two interventions (reinforcement based-DRI and punishment based -time out). The remaining teachers read written descriptions of the same interventions. Half of the participants in the videotaped group and half of

the participants in the written format were exposed to the two conditions of the interventions: jargon usage versus non-jargon usage. Each teacher completed a (TEI) rating scale following the presentation of each condition. The order in which the two interventions were presented in the written and videotaped groups was counterbalanced.

A four factor, 2 (terminology: jargon vs. non jargon) x 2 (intervention type: reinforcement based vs. punishment based) x 2 (modality: videotape vs. written format) x 2 (order of intervention presented: reinforcement based first vs. punishment based first) analysis of variance with repeated measures in the intervention type factor was conducted on the TEI rating scales. The effects of the intervention type was statistically significant at ($p < .005$). Furthermore, the terminology and intervention type was also significant at the ($p < .01$) level. The effects of jargon differed depending on the intervention type. According to Hyatt & Tingstrom (1993), the jargon description of time out was rated as significantly higher than the non-jargon description at ($p < .05$). In addition, the TEI ratings were significantly higher for both interventions when the punishment based intervention was presented first. Furthermore, the written description of time out received higher ratings than the videotaped version at ($p < .05$). The acceptability of this specific combination (jargon usage and written modality) demonstrated positive effects for intervention preference when the two measures were combined.

In the event that a consultant chooses to recommend a punishment based intervention such as time out, the researchers suggest that jargon usage in its description of the intervention may improve the intervention's acceptability. A major limitation identified in this study is that this was an analogue situation and the generalization of this technique would be in question in real school-based consulting situations. Future research should focus on measuring implementation of accepted interventions.

Researchers have used analog studies to identify factors that appear to be related to the acceptability of various interventions. Contrary to Hyatt & Tingstrom (1993), some studies have determined that positive treatments (reinforcement-based) are usually rated by a variety of consultees' as more acceptable than negative treatments (punishment-based). In general, researchers believe that the more complex the intervention procedure the less acceptable it will be. In addition, they feel that the more severe a child's problem is the more acceptable any given intervention will be. Previous research suggests that behavioral interventions are more effective than non-behavioral interventions. Conjoint behavioral consultation (CBC) is a consultation model that can be used with multiple participants across various settings. The CBC problem-solving process involves four stages: problem identification, problem analysis, treatment implementation, and treatment evaluation. There remains a need to evaluate the consultee's acceptability of behavioral interventions delivered through the CBC model.

Cowan and Sheridan (2003) hypothesized that parents, teachers and students would rate an intervention composed of both reinforcement-based and punishment-based as less acceptable than those using a reinforcement-based component only. Their study hypothesized that parents and teachers would rate a more complex intervention as less acceptable. As a result, for problem behaviors subjectively rated as more severe by parents and teachers, more complex interventions would be more acceptable. In addition, it was hypothesized that as the subjective rating of the problem behavior severity increased, so would the acceptability of more complex interventions.

There were 67 students involved in the study who were enrolled in kindergarten through 9th grade and a total of 67 parents. Forty-five of the 67 parents completed the Behavioral Intervention Rating Scale (BIRS). There were a total of 67 teachers involved in the CBC model and sixty-two of the 67 teachers completed the BIRS. There were 39 school psychology graduate students that served as consultants that were trained to use the CBC model. The consultation cases were conducted across six large school districts, and intervention procedures were implemented by parents and teachers across a variety of settings from the home to the school. There were four independent variables used for various analyses in the present study: (1) type of behavioral intervention used (home-note, self monitoring, training/skills enhancement, and punishment based), (2) whether the intervention consisted in punishment based, (3) number of components used in the intervention, and the (4) subjective problem severity rating by the teacher and parent. Parent, teacher, and child acceptability ratings of the intervention used in CBC served as the dependent variables. Consultant acceptability was defined as a subjective judgment about treatment procedures.

Parents and teachers were asked to rate the severity of the problem addressed through consultation using a 7 point Likert-scale. The BIRS was used to assess parent and teacher intervention acceptability. The BIRS consists of 24 self-report items rated on a 6 point Likert scale. Student intervention acceptability was measured using the Children's Intervention Rating Profile (CIRP). According to Cowan and Sheridan (2003), overall parents, teachers, and students approved of a variety of specific behavioral interventions delivered through the CBC model. Their study suggests that for parents, interventions composed of both positive and punishment based were deemed more acceptable than positive interventions alone. For teachers as a group, their study revealed a significant relationship between complexity of intervention and treatment acceptability ratings. However, the pattern was opposite to that predicted. The data gathered indicated that as the intervention complexity increased so did treatment acceptability. This may be due to the fact that teachers may be more willing to implement complex interventions as needed to meet the individual needs of a child. In addition, their study did not support the hypothesis that as treatment severity increases so does the acceptability of more complex interventions. Furthermore, for teachers as a group, there was a relationship between predictor variables and treatment acceptability. As problem severity increased, so did the acceptability of all interventions contrary to the hypothesis stated. This may be due to the inclusion of students with various needs within the general education classroom. Teachers are becoming more familiar with implementing relatively complex interventions.

A major limitation identified is that data collection for all participants was not successful. Some of the parents and teachers participants had incomplete ratings or rating measures were misplaced. Another limitation was that there was not enough power in the parent data set regression analyses to detect a relationship.

The collaborative approach to consultation has been the subject of much debate as researchers try to determine which model of consultation is the most successful. Some school's counties have reported less favorable consultation experiences as consultees' sometimes become resistant to the consultation process failing to implement and or accept the interventions recommended. Gutkin (1999) reviewed of the consultation literature in order to clarify the future direction of school-based consultation focusing on both the consultant (school psychologist) and the consultee (teacher). Gutkin (1999) defines the collaboration approach to consultation as

“...process of joint decision-making between consultant and consultee, with both parties having the opportunity to exert leadership and provide input whenever they believe it would be appropriate.”

As a result, Gutkin (1999) reveals several congruent findings in the literature. Although consultants are seen as providing more active leadership interactions during consultation, consultees were measured to actually make more verbal utterances than consultants, indicating that consultees are not passive participants during the consultation. Another finding suggested that even though consultants achieved higher scores on a domineering scale, they were still able to use a collaborative approach with consultees. Furthermore, consultation was evaluated on four different dimensions: (1) collaborative-directive, (2) collaborative-nondirective, (3) coercive-directive, or (4) coercive-nondirective. Consultants who employed the collaborative-directive approach in consultation were found to match the true meaning of “collaborative” as defined earlier. They can be authoritarian but receptive, employ joint-decision making, and respect the consultee’s right to reject an idea. They may also use psychotherapy techniques to project their expertise onto consultees as a means of facilitating change. In addition, consultants who attempt to match treatment recommendations with consultee’s perceptions are more often selected by consultees. Gutkin (1999) reveals that the collaborative-nondirective consultation approach disregards the consultee’s perceptions and focuses more on the use of Rogerian counseling techniques to achieve the objective: the acceptability and implementation of those interventions. However, Gutkin (1999) reports that although the interventions proved to be successful since the problem symptoms decreased, it was due to the implementation of a different intervention not generated through the consultation process.

It seems that in this particular case, the consultant had generated the intervention a priori; therefore, somewhat invalidating the process of collaborative consultation as defined earlier. The coercive-directive approach was more relevant to treatments employed by pediatricians in order to implement medical treatments and therefore cannot be evaluated within the school-based model of consultation at this time without further research. Finally, the coercive-nondirective approach may be the most difficult one due to its incompatible nature. Although empirical findings are premature within this approach, Gutkin (1999) reveals the coercive-nondirective consultation process to be rigid and inflexible. Consultants employing this approach rarely revise recommendations or engage in concrete suggestions. In conclusion, the collaborative-directive approach may be the most beneficial approach to school-based consultation (Gutkin, 1999). Consultants should consider that different situations may call for different consultation approaches and therefore the consultant should be skillful in the art of consultation and have the ability to employ different approaches based on the situation.

Conclusions

Based on this brief review of the literature, a gap might exist between acceptability and implementation of a consultation derived intervention. Research suggests that using the CBC problem solving model of problem identification, problem analysis, plan development and plan implementation usually results in problem solution. In addition, consultant variables such as employing a collaborative-directive approach (interviewing skills, matching consultee’s rationale, and use of psychological principles to solve educational problems) in conjunction with the CBC model help facilitate acceptability and implementation of interventions derived from the consultation process.

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About the Editor

Ann Nevin, author of books, research articles, and numerous chapters, is a scholar and teacher educator who graduated *magna cum laude* from the University of Minnesota with a Ph.D. in Educational Psychology. Her doctoral research focused on how teachers and administrators can integrate students with special learning needs. She also earned advanced degrees in special education and educational administration and has participated in the development of innovative teacher education programs since the 1970s. Her research with colleagues in the Vermont Consulting Teacher Program used single subject designs to document the impact of various interventions to increase the academic and social progress of children with disabilities in general education classrooms. Her advocacy, research, and teaching includes more than 30 years of working with a diverse array of people to help students with disabilities succeed.

Dr. Nevin has co-authored several well-recognized books, e.g., *Collaborative Consultation* (published by PRO-ED), *Turning Learning Inside Out* (Waterfront Books), and *Creativity and Collaborative Learning* (Brookes Publishing Company). Her most recent book illuminates the power of co-teaching (*A Guide to Co-Teaching: Facilitating Student Learning*, published by Corwin Press in April 2004) and is co-authored with Jacqueline Thousand and Richard Villa.

As Dr. Nevin explains, "My presentations, workshops, and classes are designed to meet the individual needs of participants by encouraging introspection, relaxation and personal discovery for optimal learning. I believe that the purpose of education is to empower others. I agree with Larry McMurtry who, in his fictional account of Calamity Jane in *Even Cowgirls Get the Blues*, had Jane say, "Most people do not realize the glory of their own lives."